

OPTICAL BIO-DISCS INCLUDING SPIRAL FLUIDIC CIRCUITS FOR PERFORMING
ASSAYS
Staimer, et al.
Appl. No.: Unknown Atty Docket: NAGACO.215A

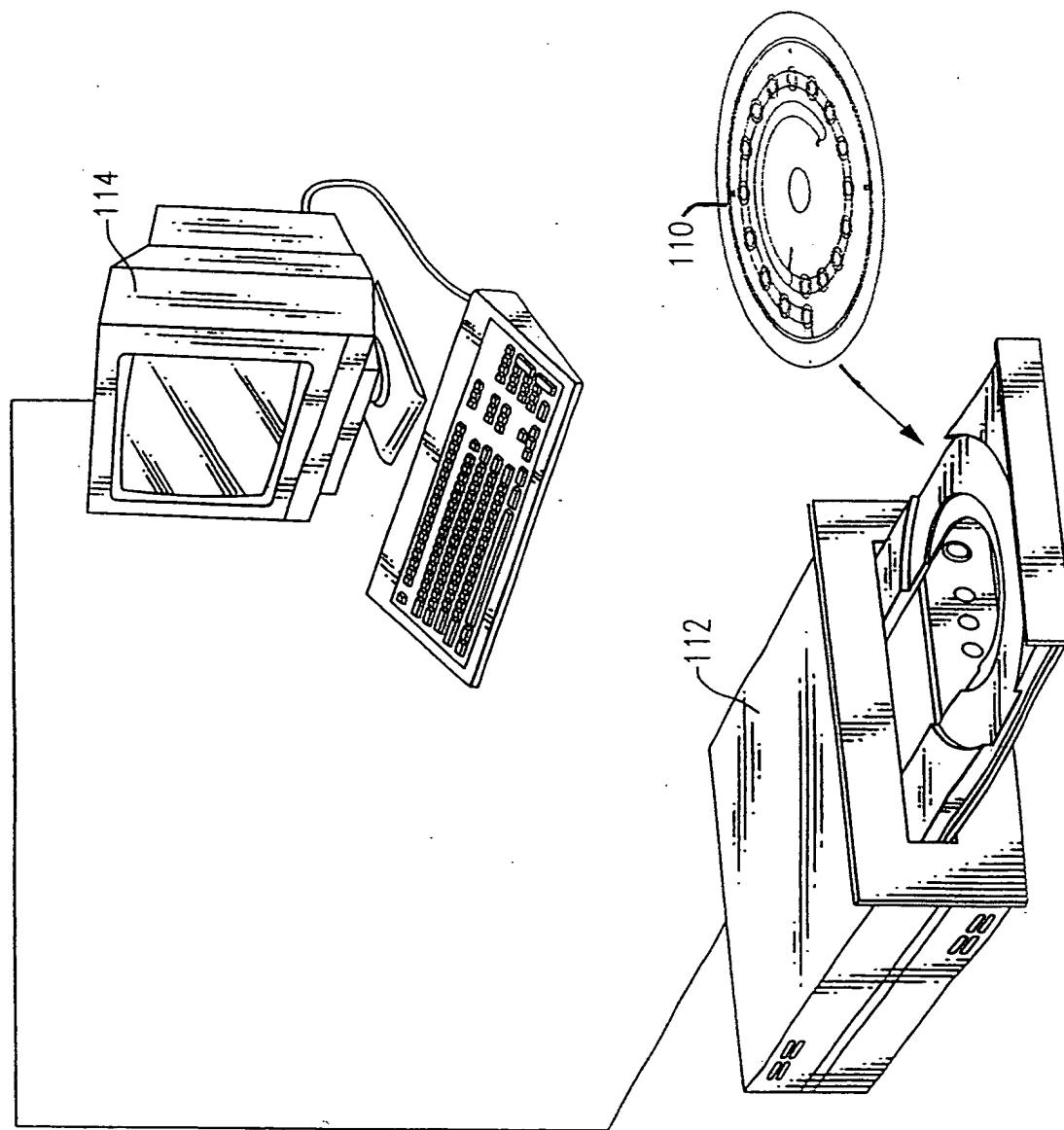
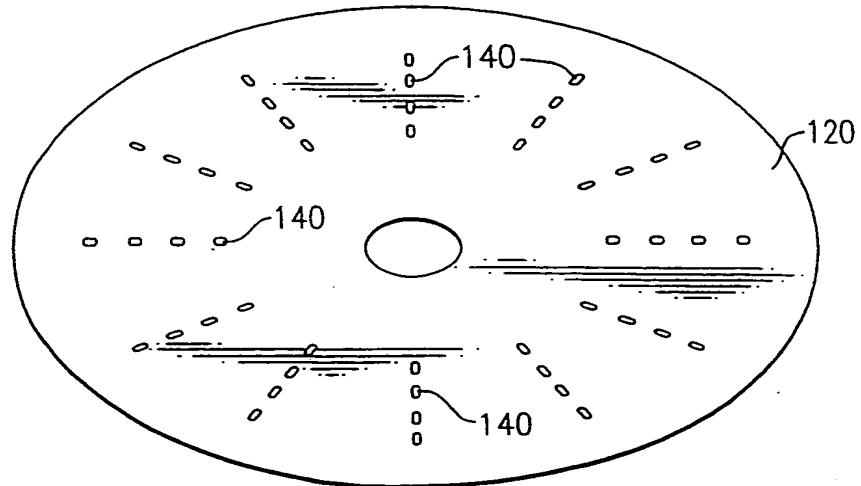
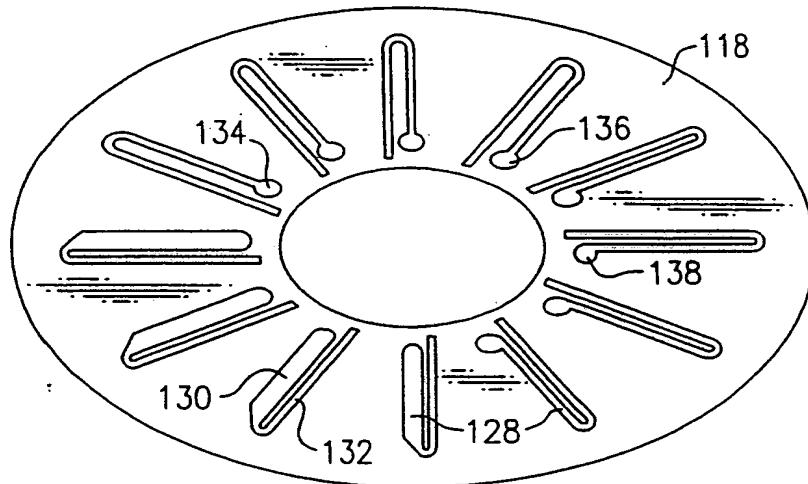
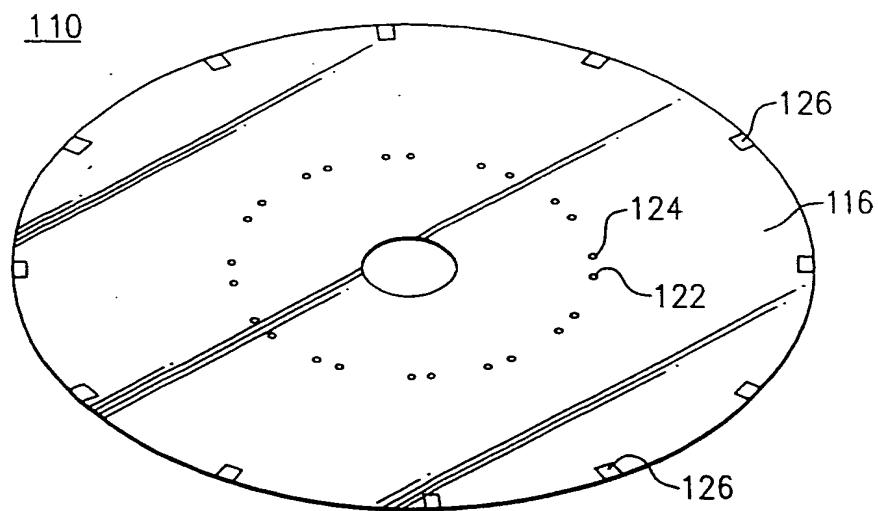


FIG.1

FIG.2



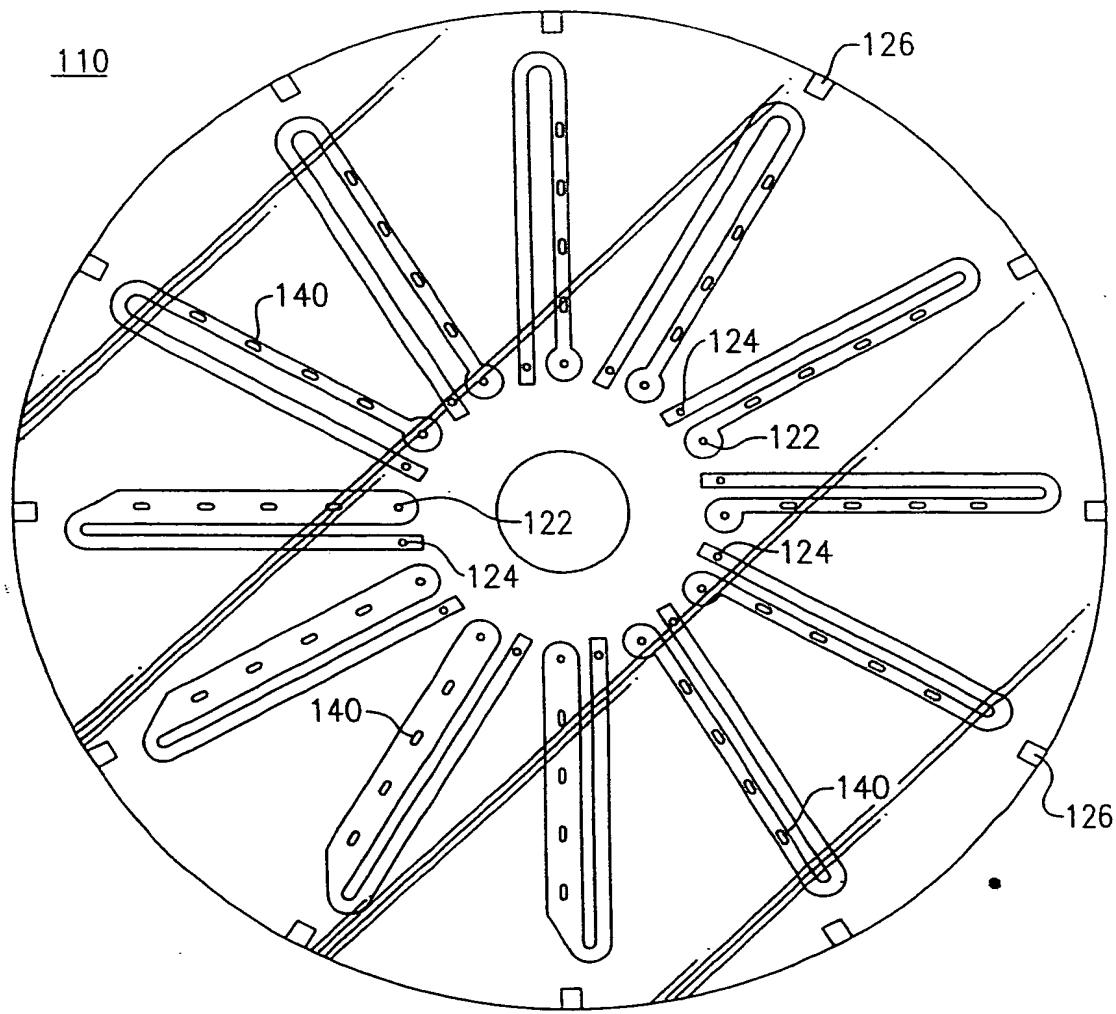


FIG.3

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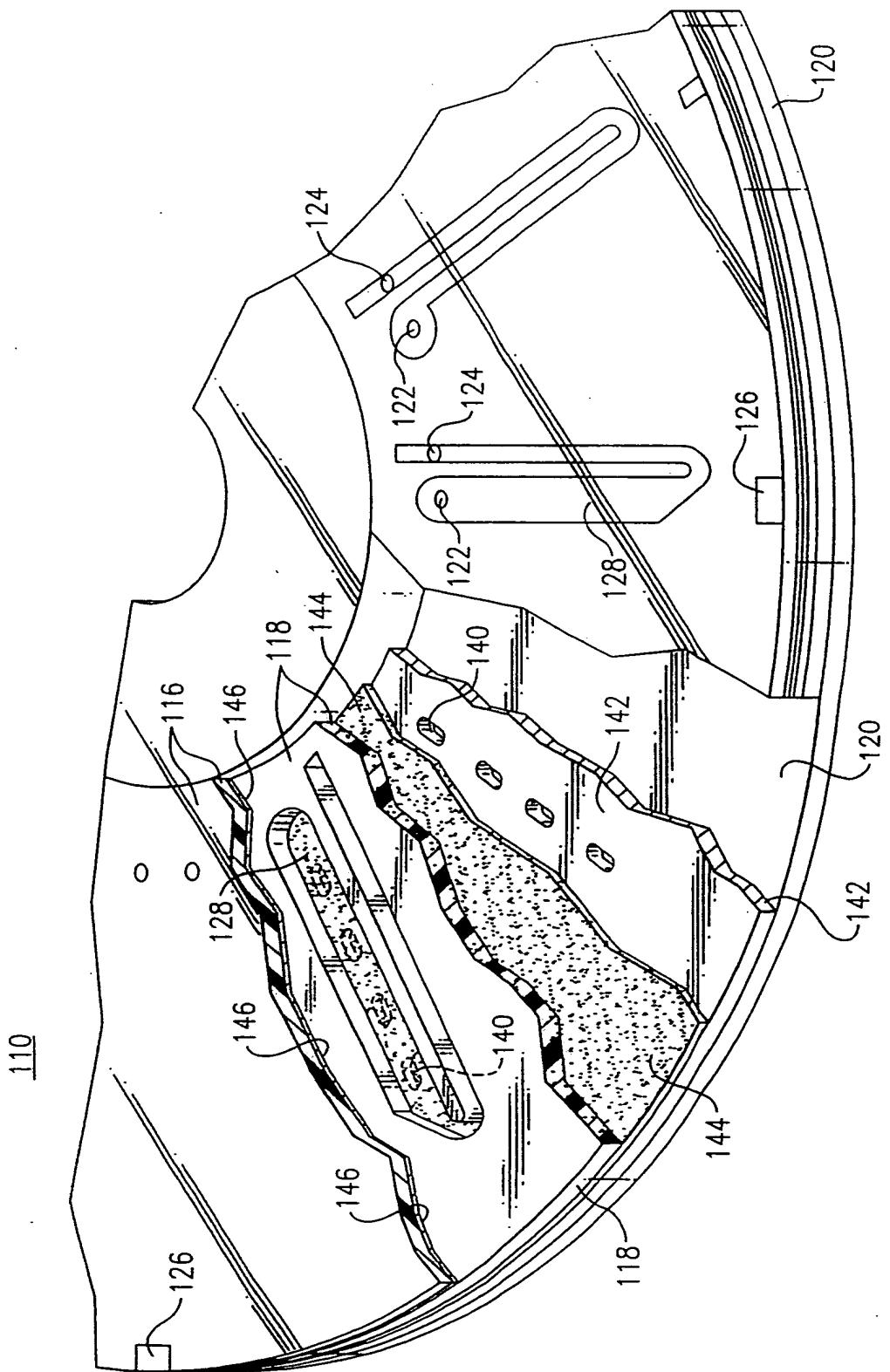
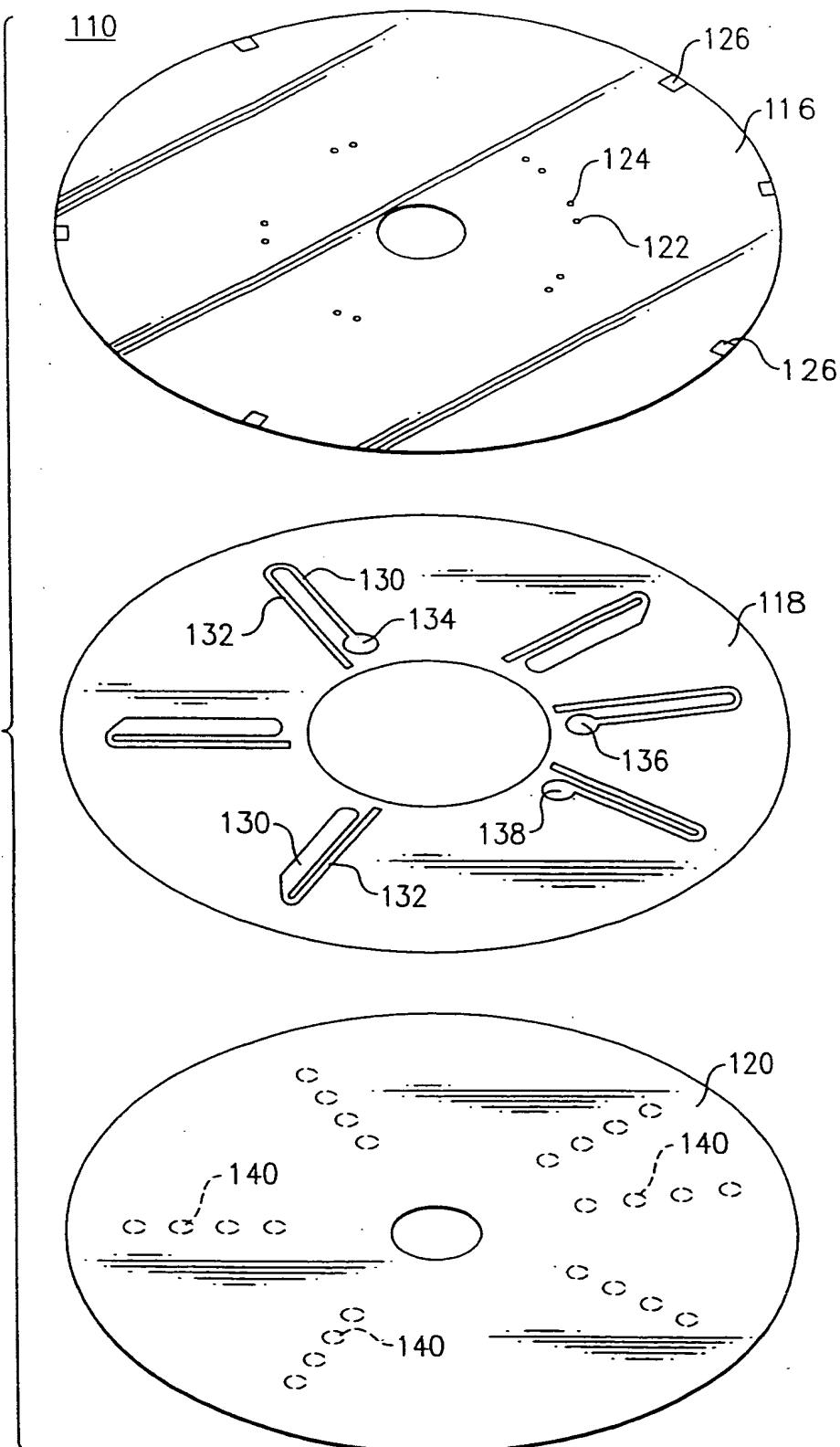
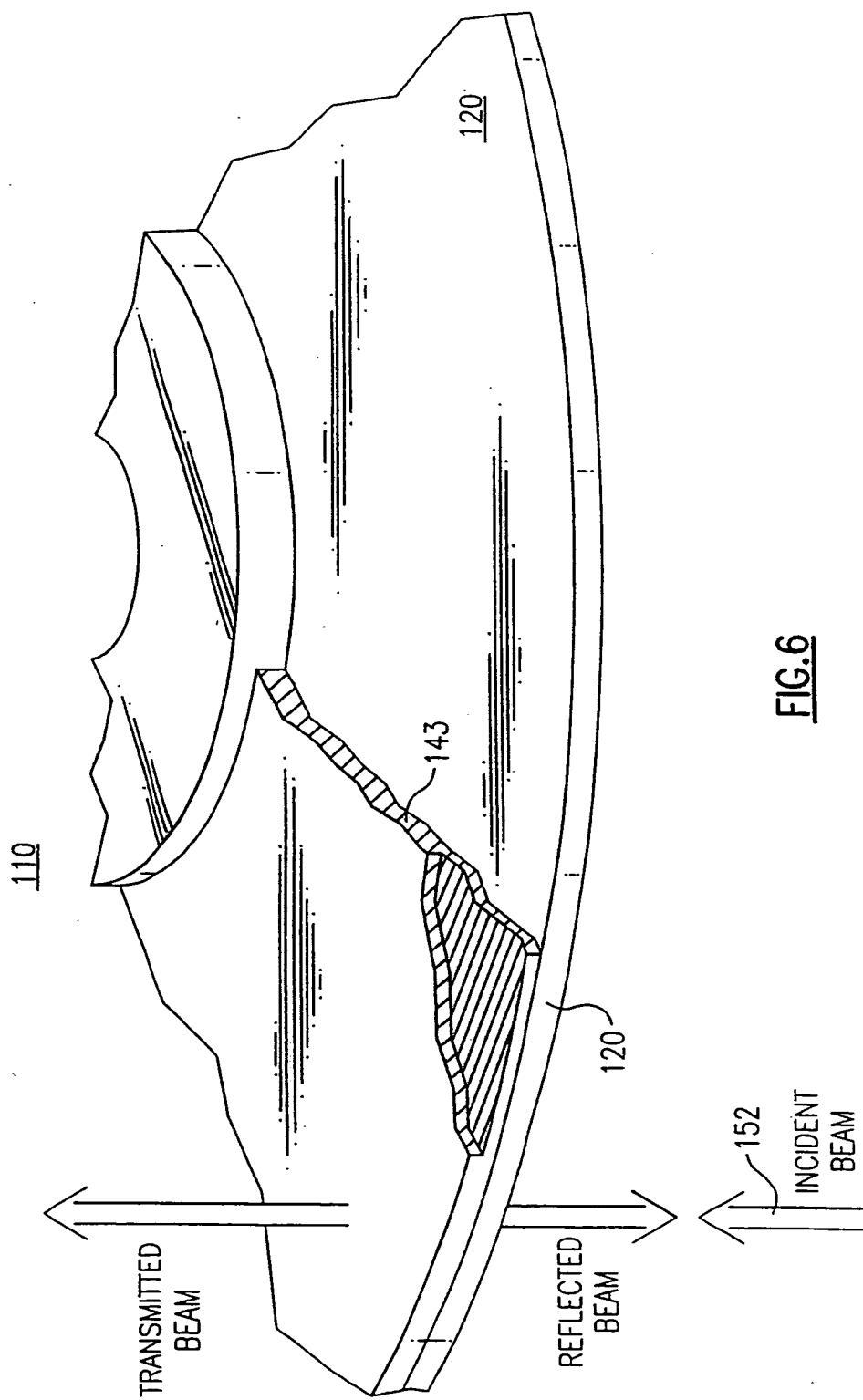


FIG.4

FIG.5





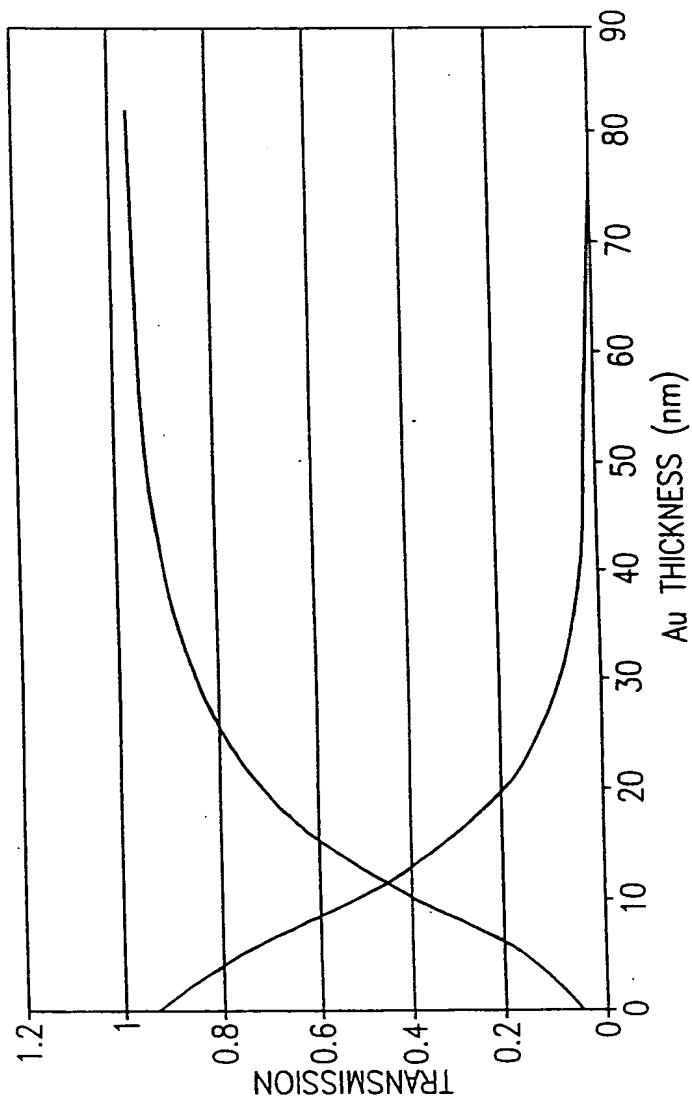


FIG.7

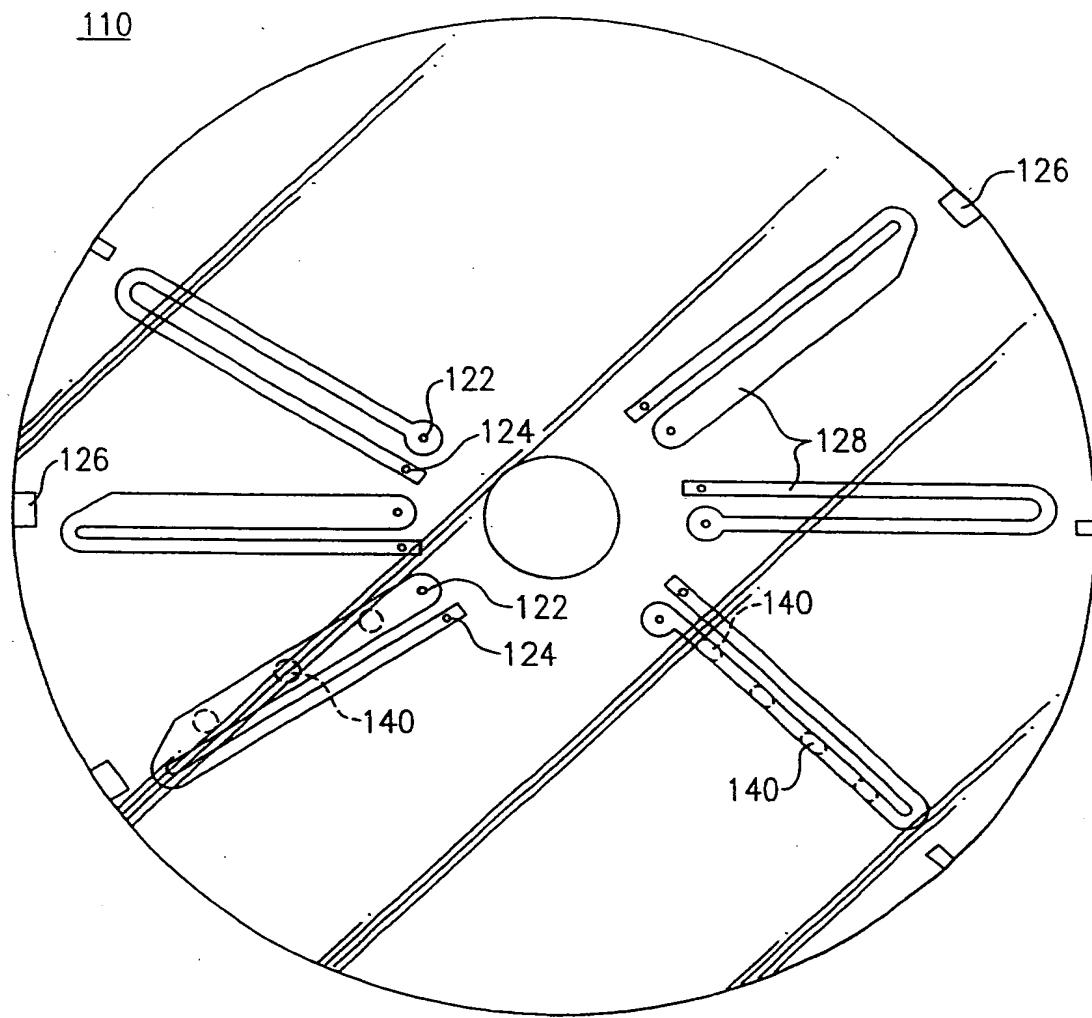


FIG.8

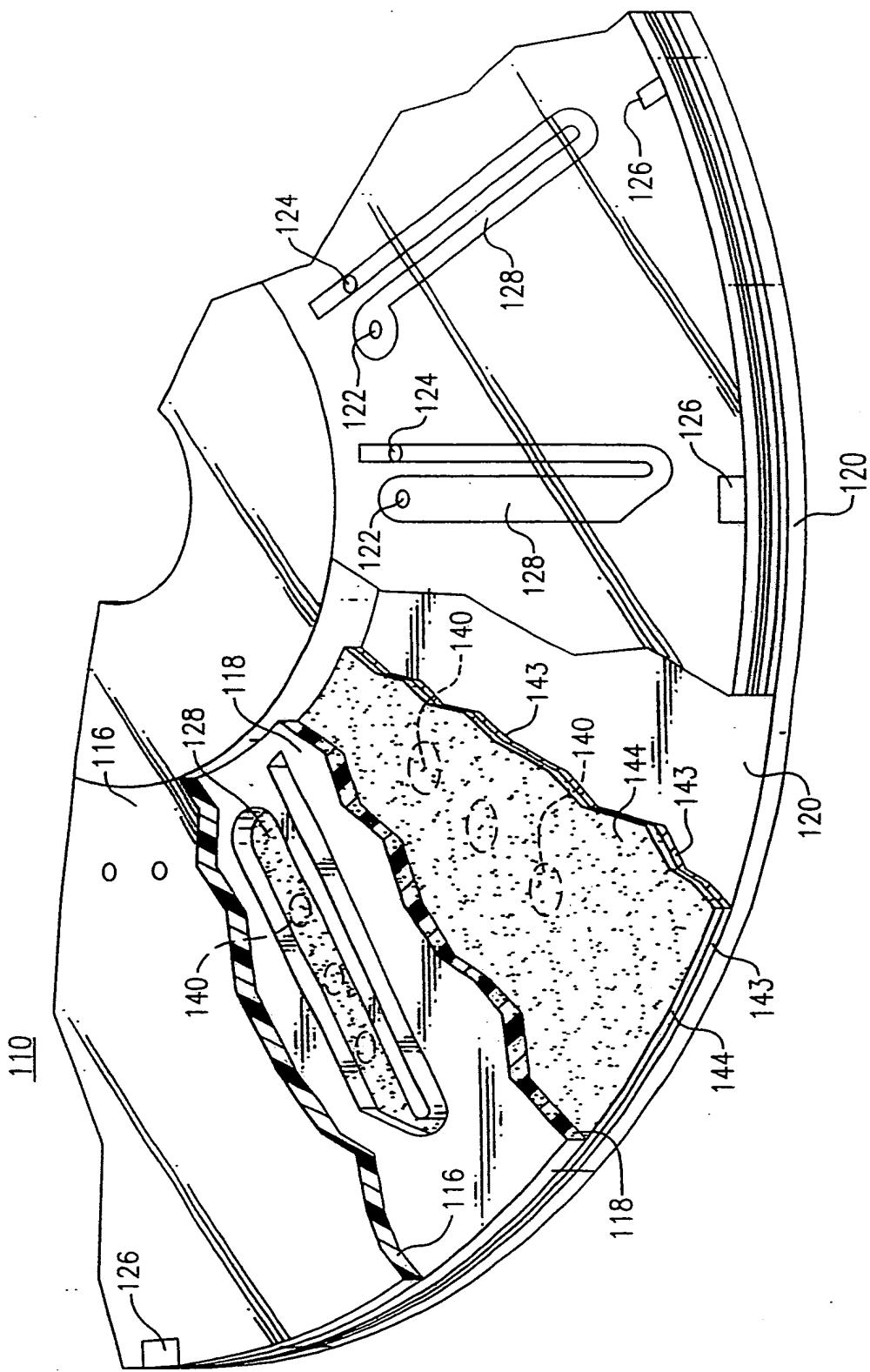


FIG.9

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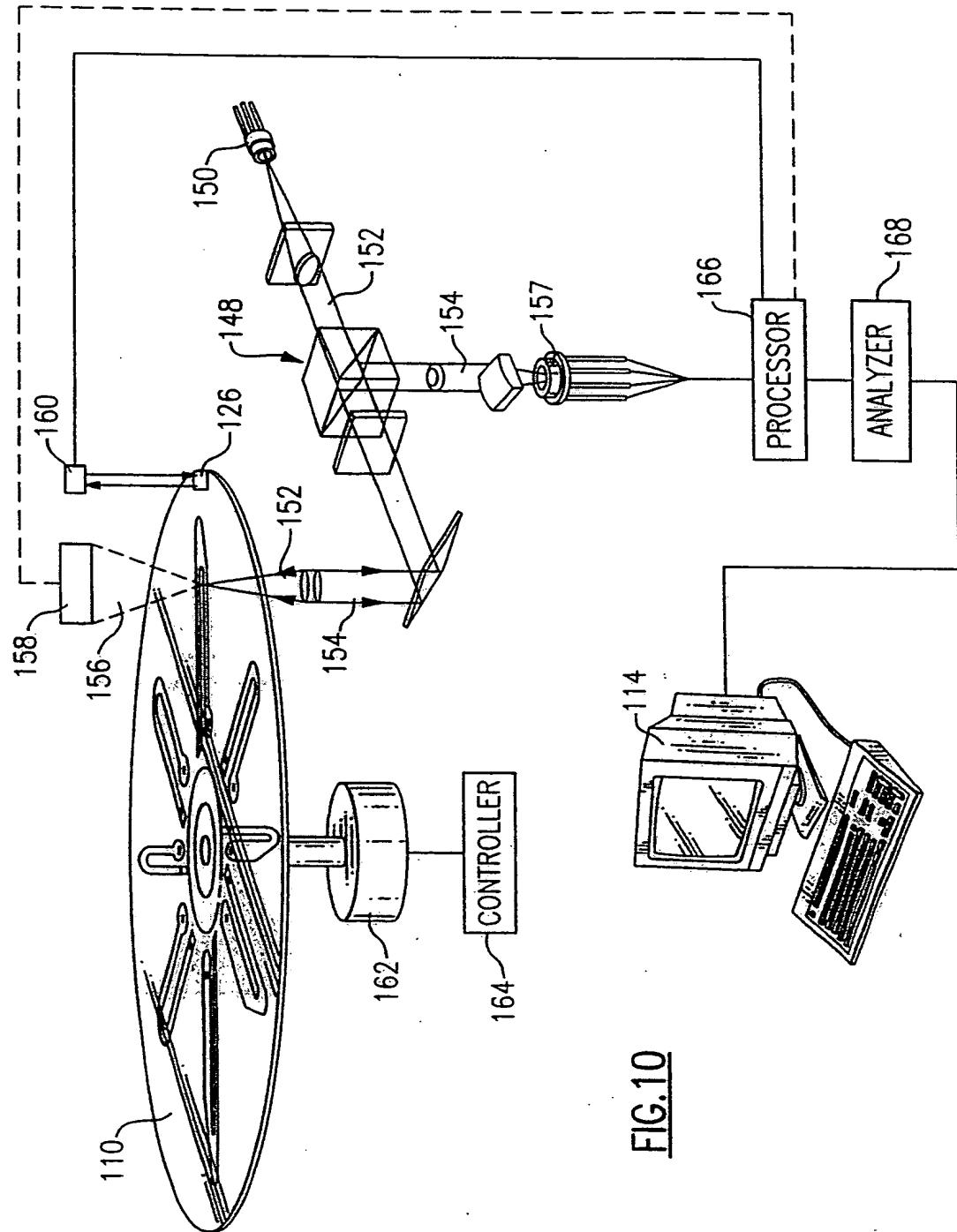


FIG. 10

110

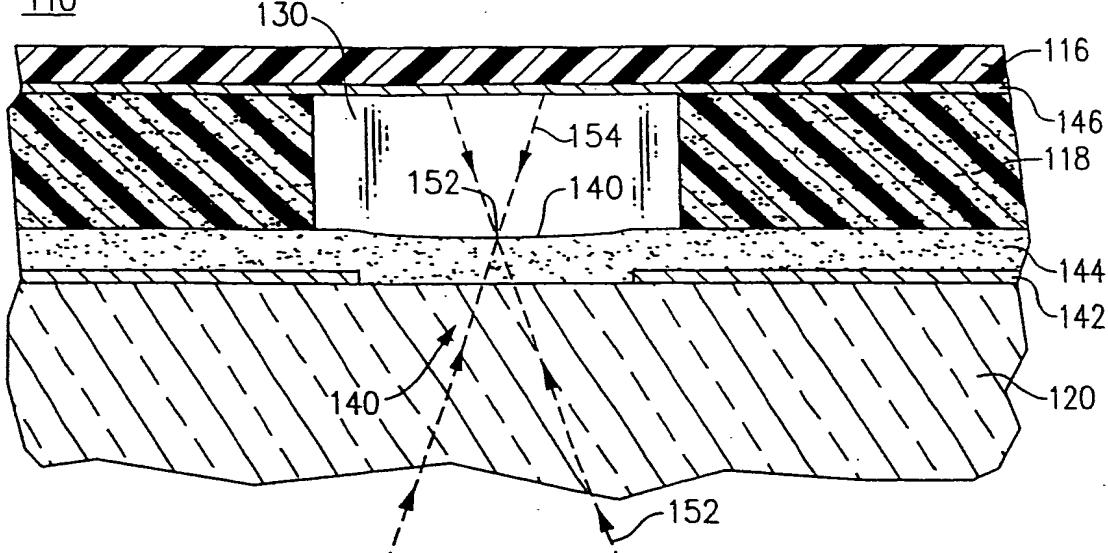


FIG.11

110

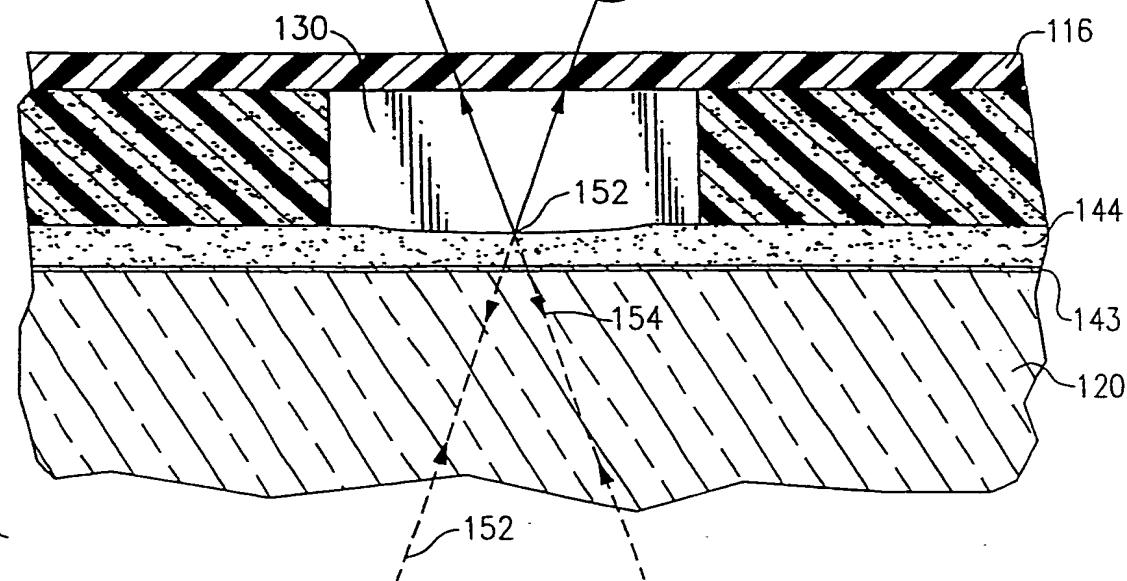
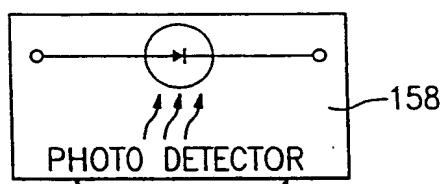


FIG.12

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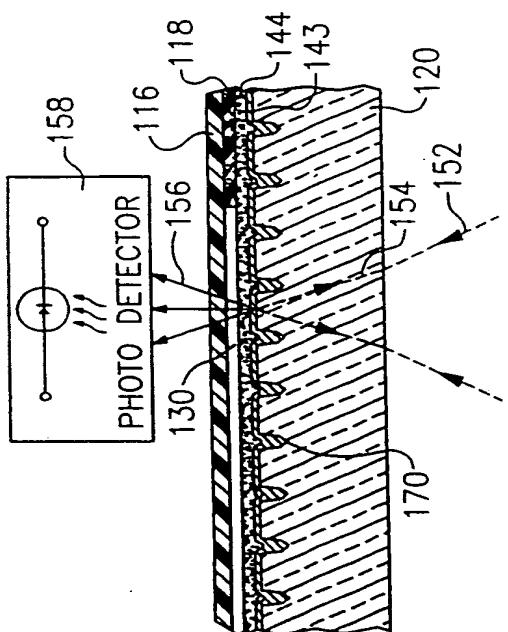


FIG. 14

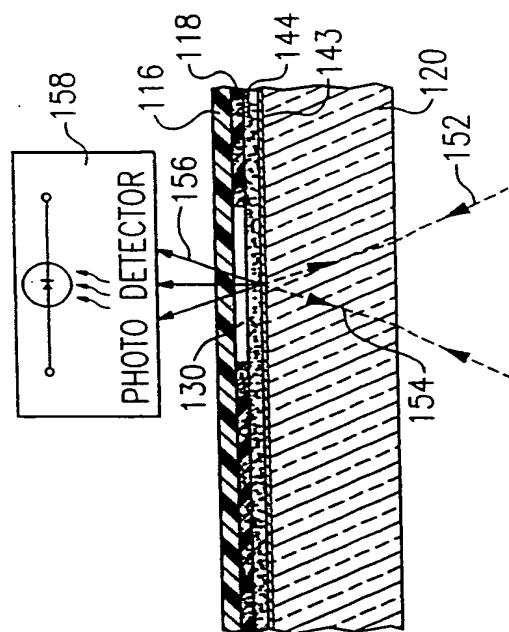


FIG. 16

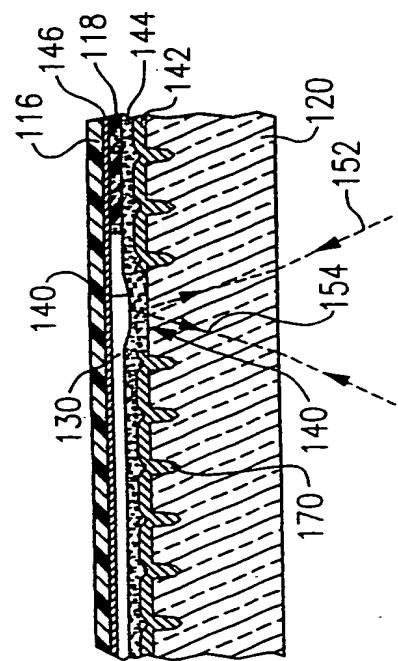


FIG. 13

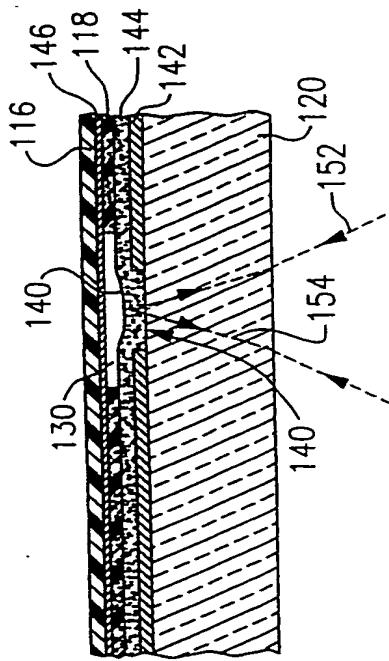


FIG. 15

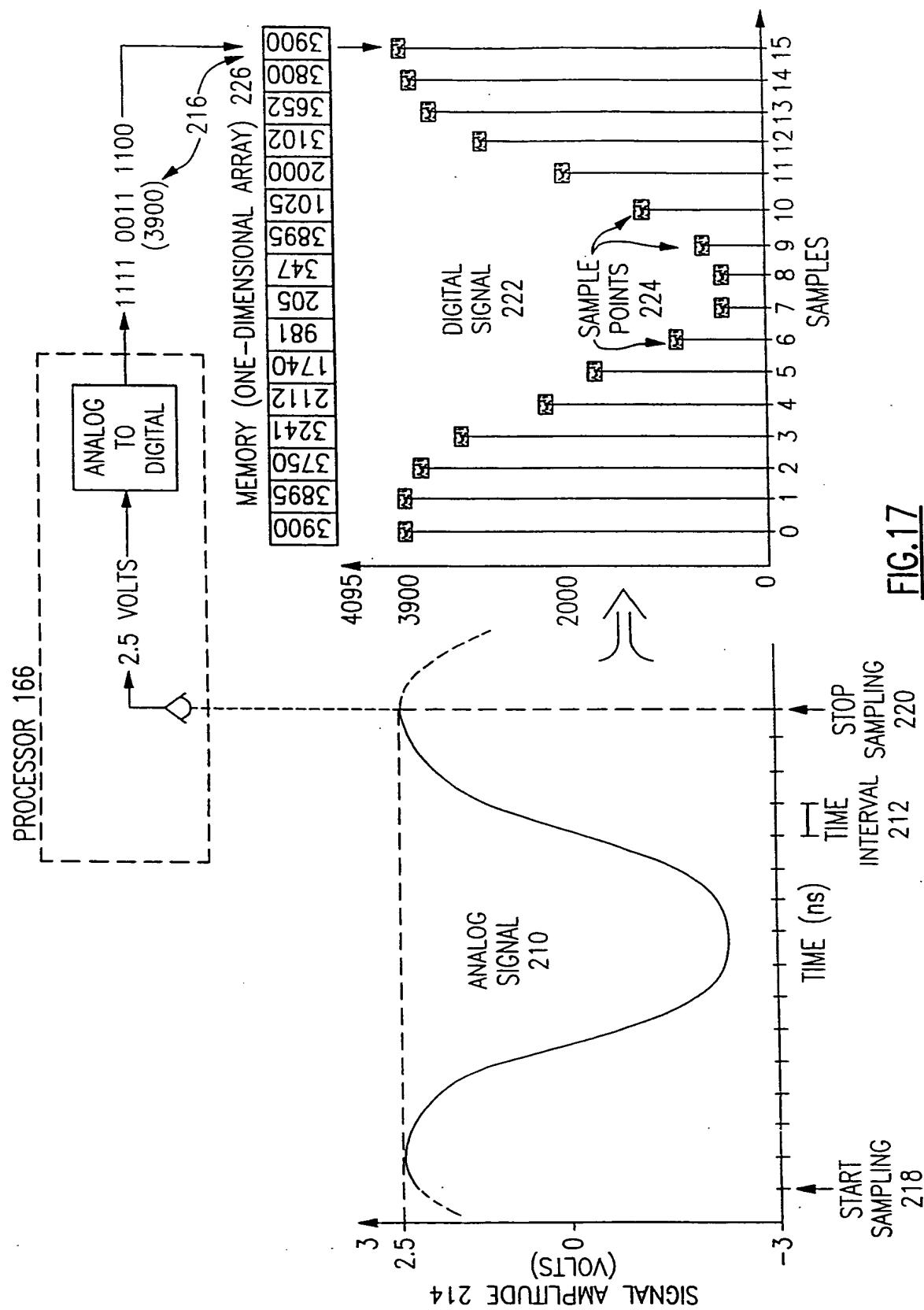


FIG.17

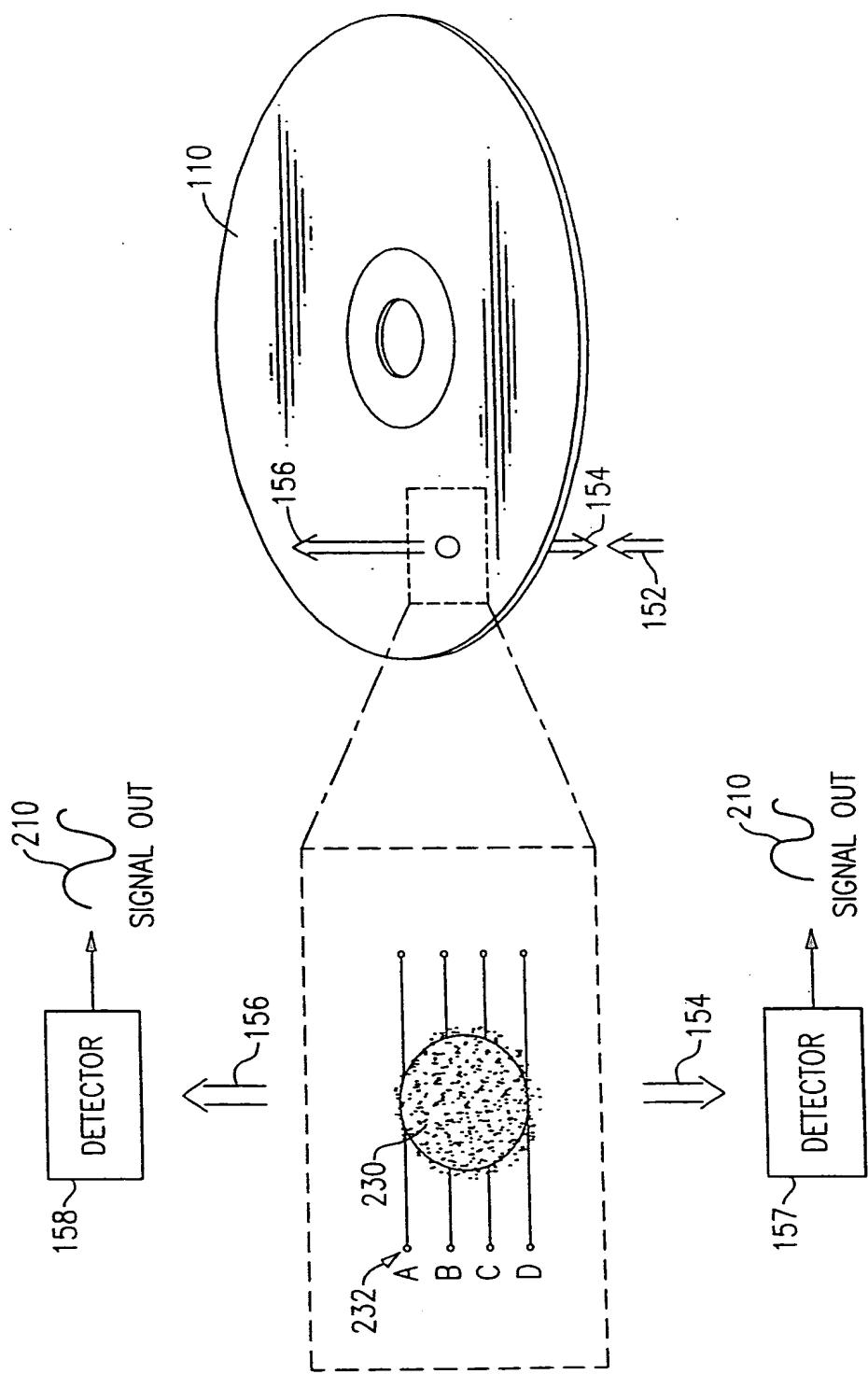


FIG. 18

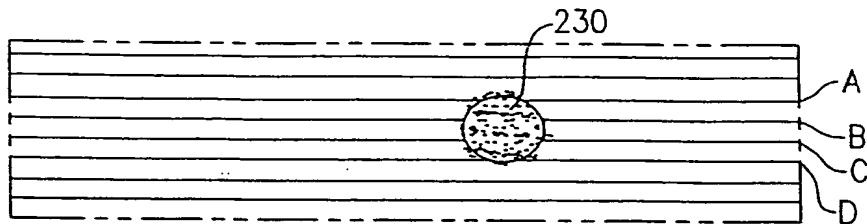


FIG.19A

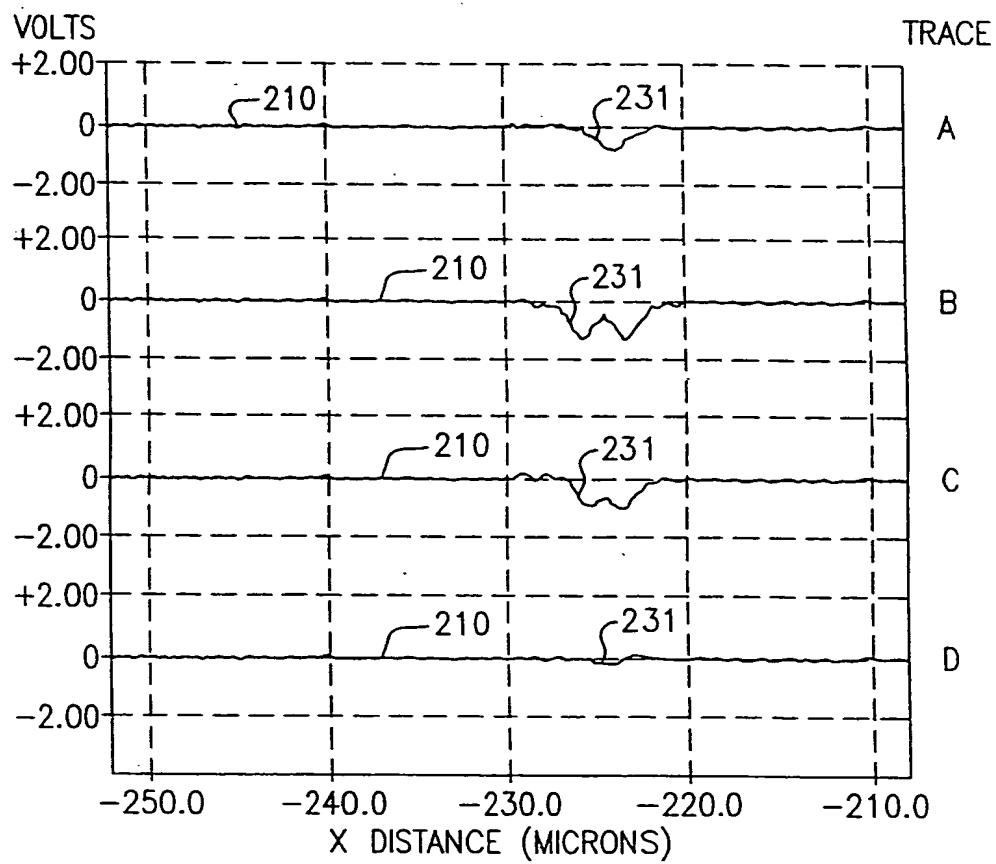


FIG.19B

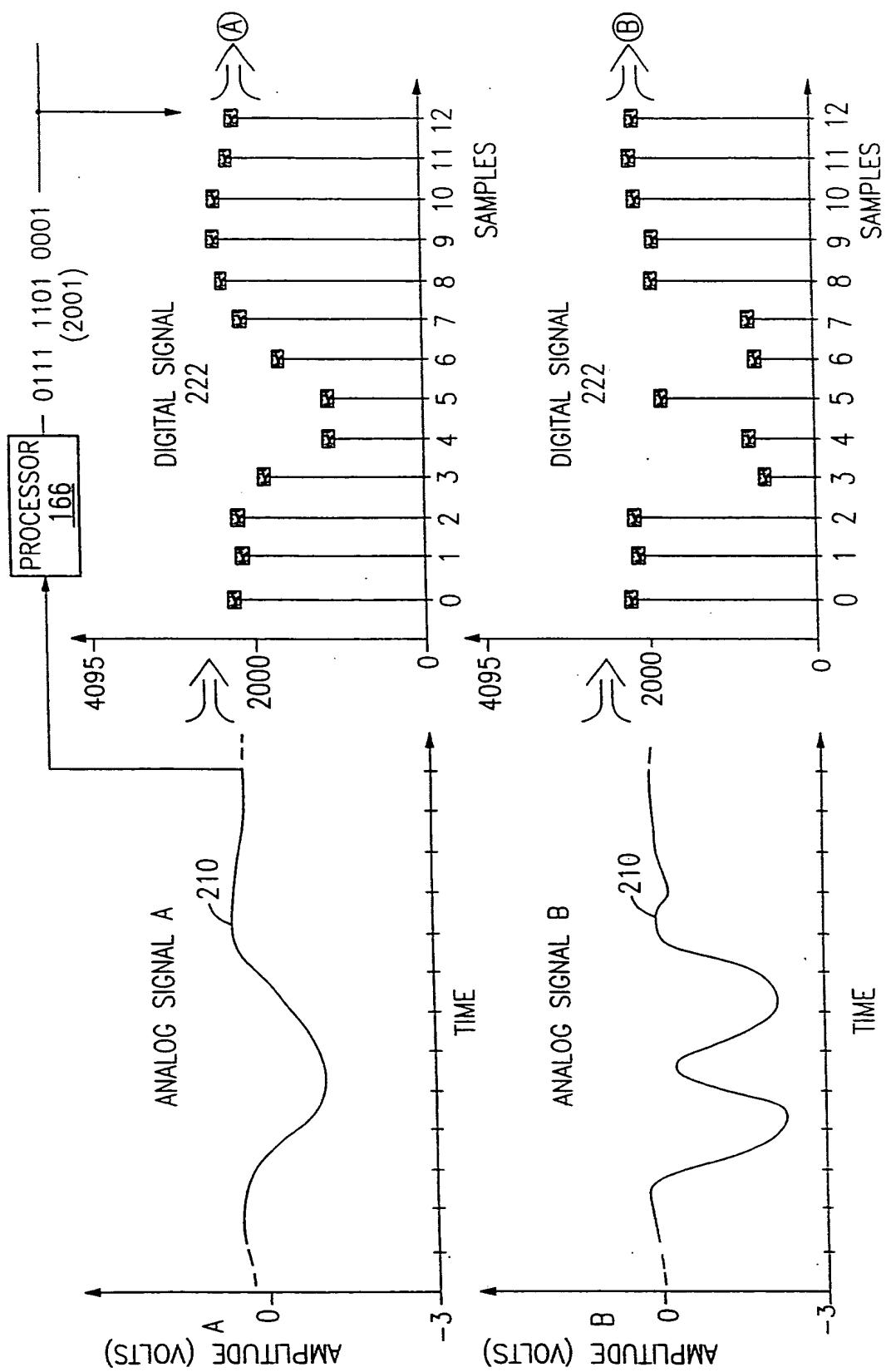
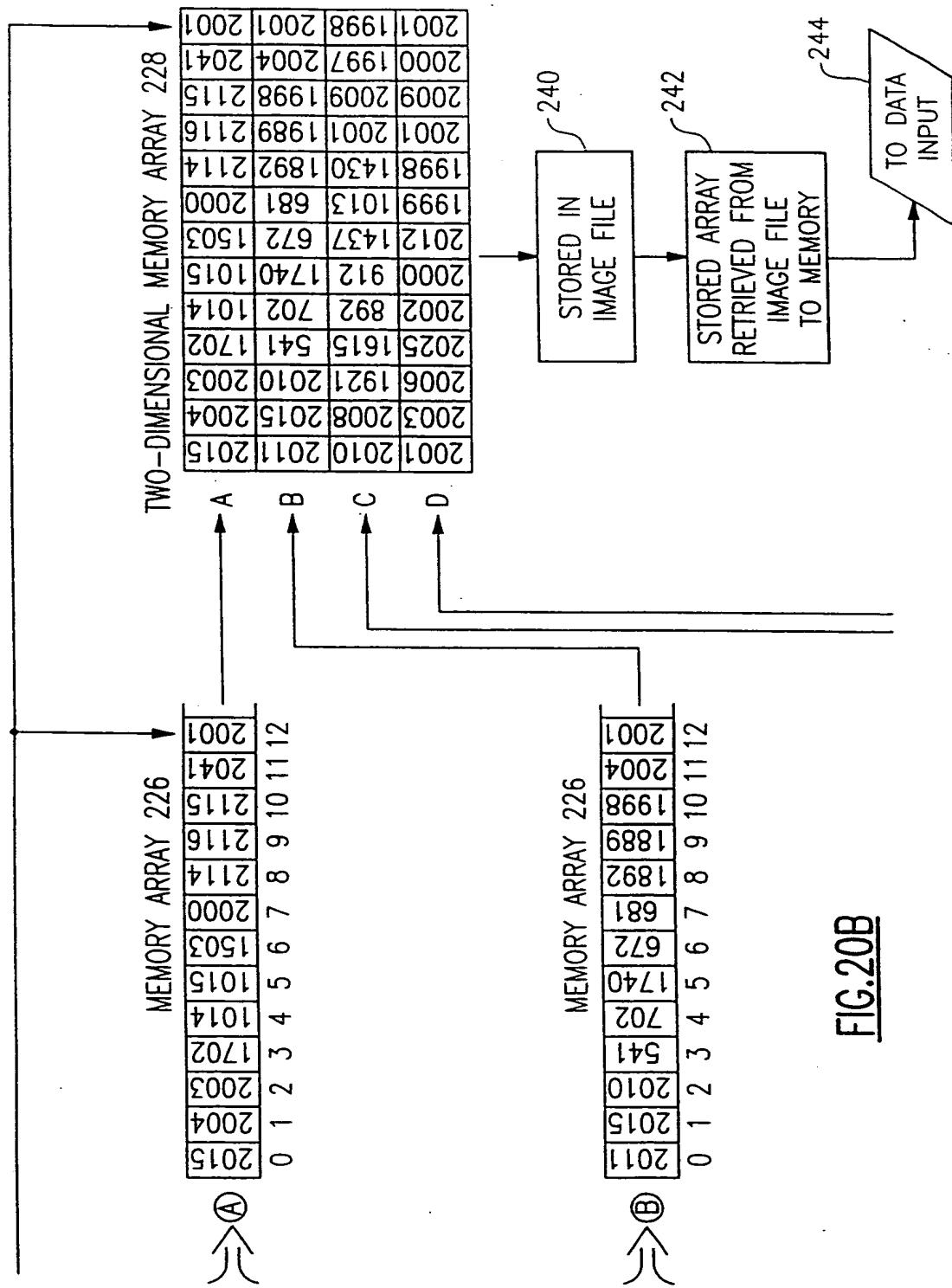


FIG.20A

**FIG.20B**

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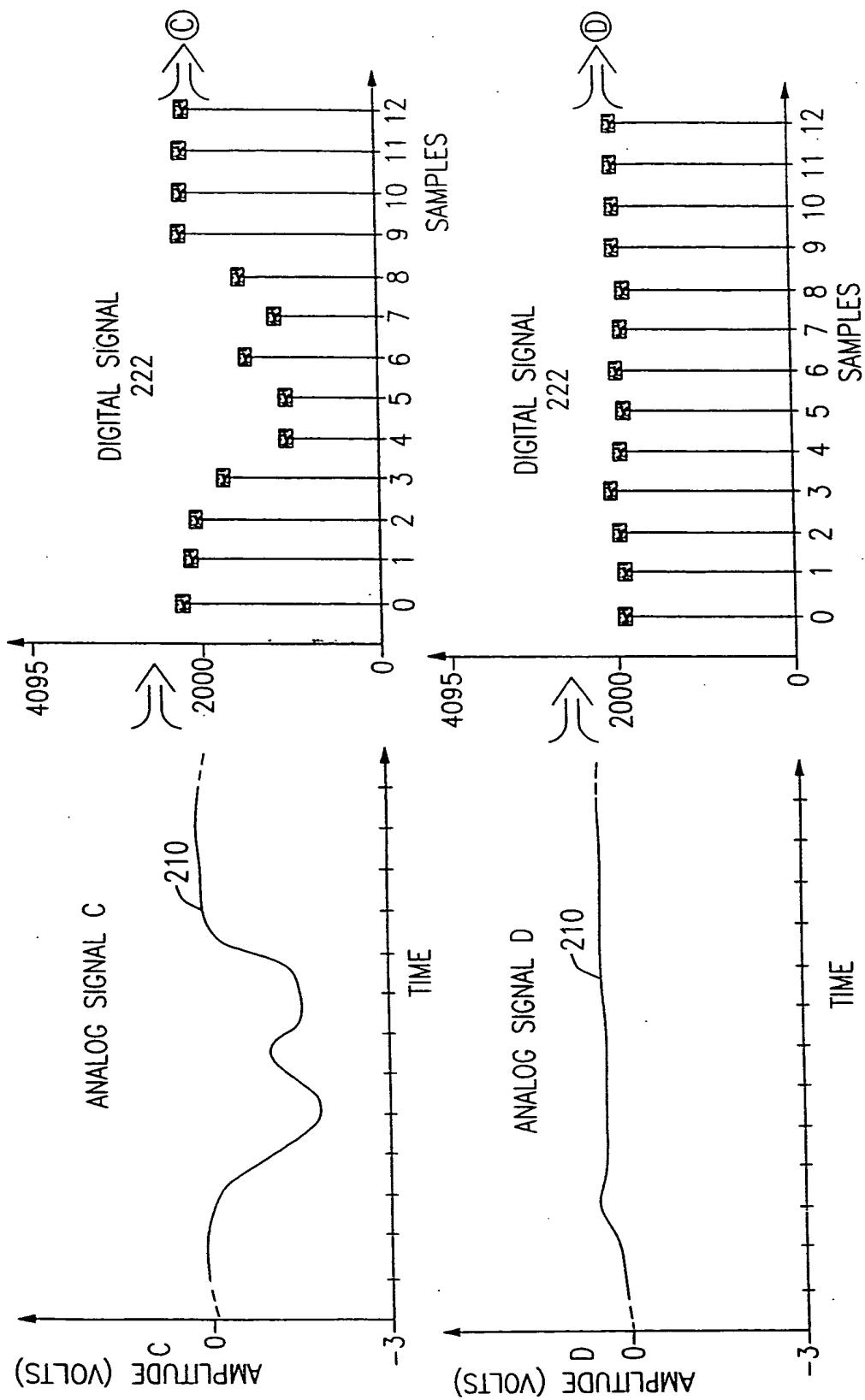


FIG.20C

OPTICAL BIO-DISCS INCLUDING SPIRAL FLUIDIC CIRCUITS FOR PERFORMING

ASSAYS

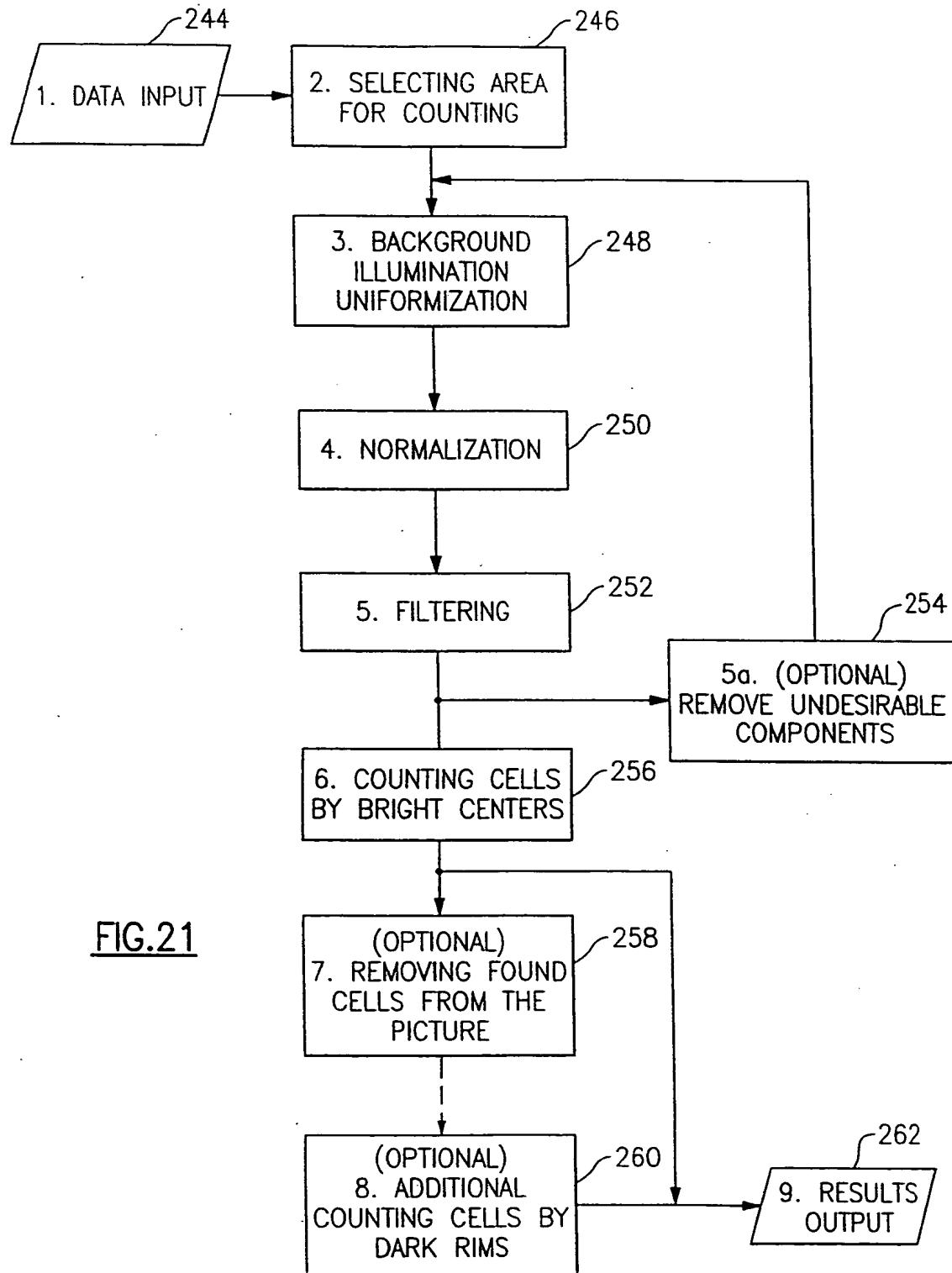
Staimer, et al.

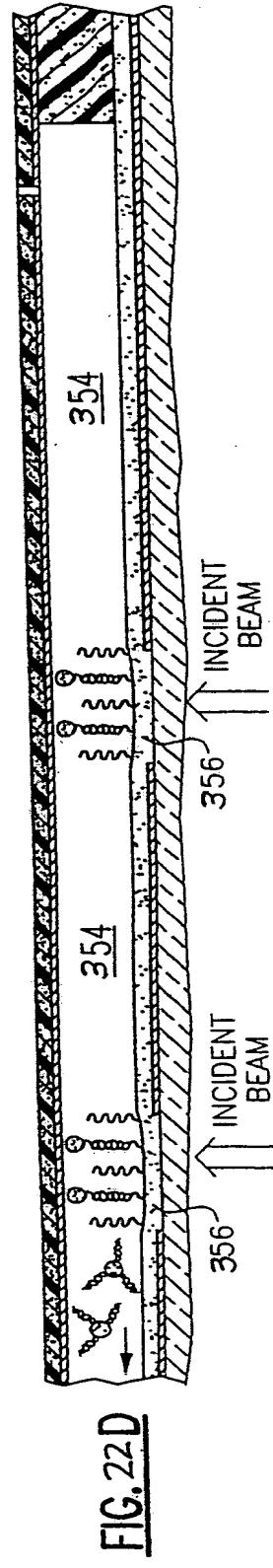
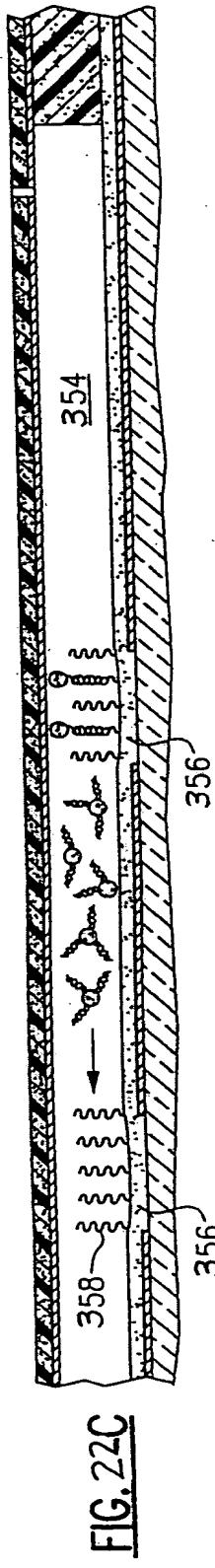
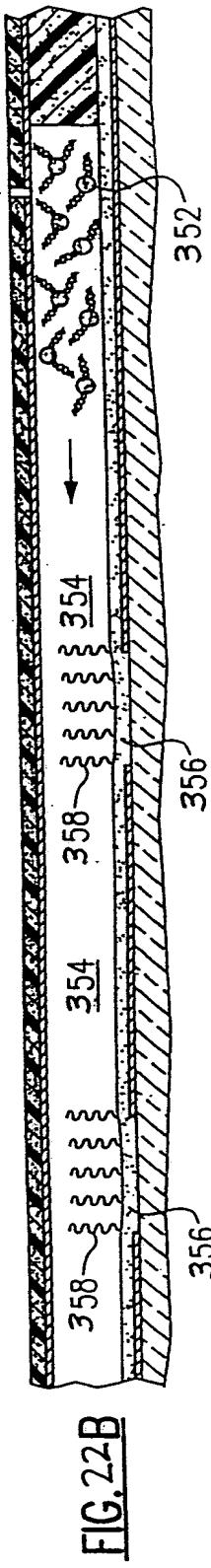
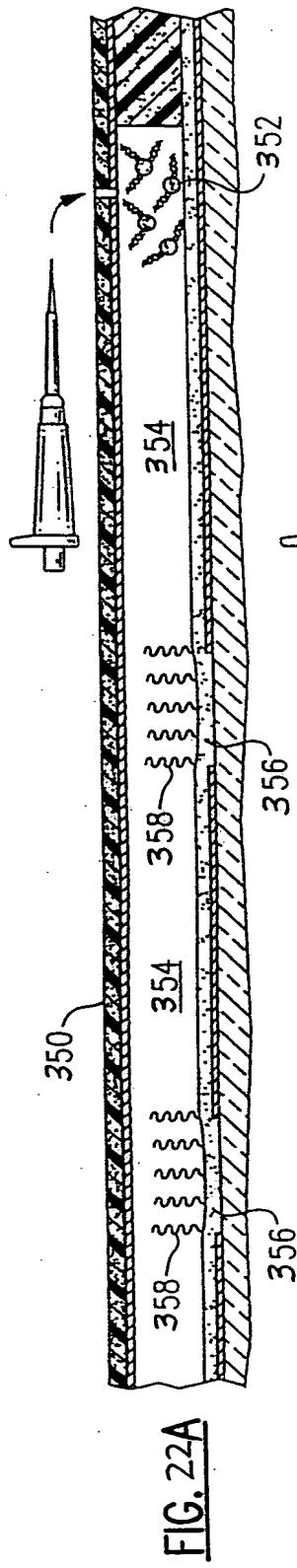
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FIG. 20

FIG. 20D

| MEMORY ARRAY 226 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 2010 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 |
| 2008 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 |
| 2001 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 |
| 1430 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 |
| 1013 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 |
| 2009 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 |
| 1997 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 |
| 1998 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 |
| 1999 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 | 1920 | 1915 | 1921 |





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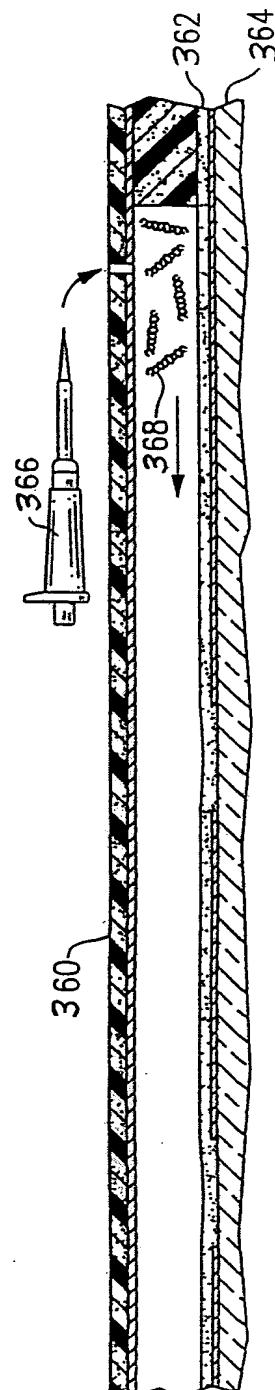
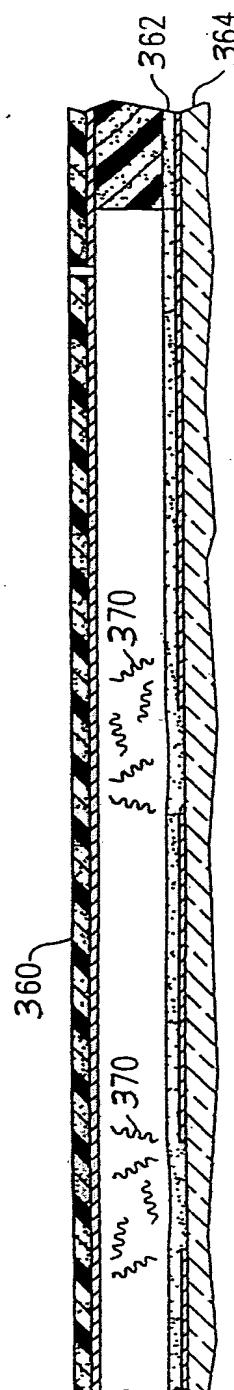
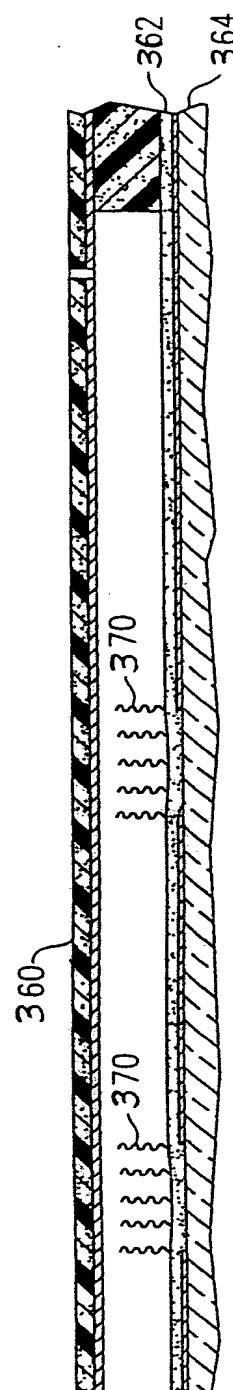


FIG. 23A



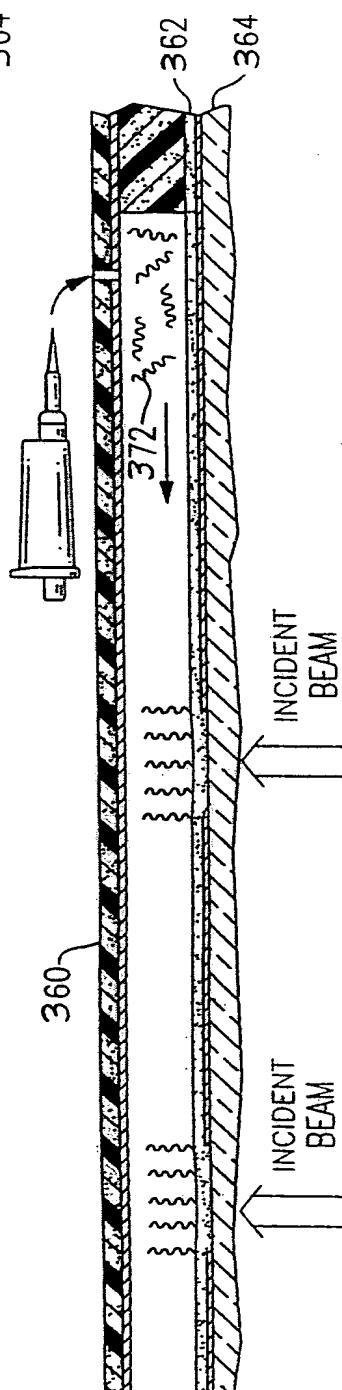
360

FIG. 23B



360

FIG. 23C



360

FIG. 23D

INCIDENT BEAM

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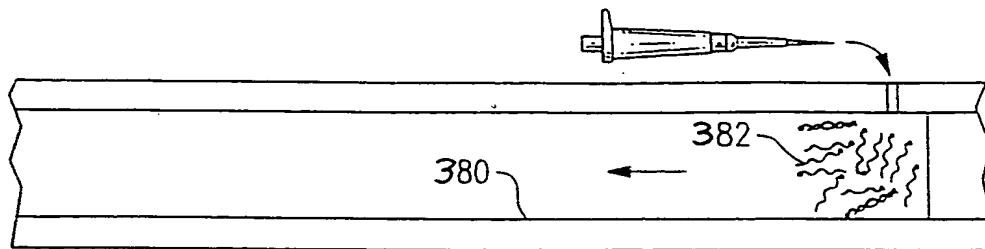


FIG.24A

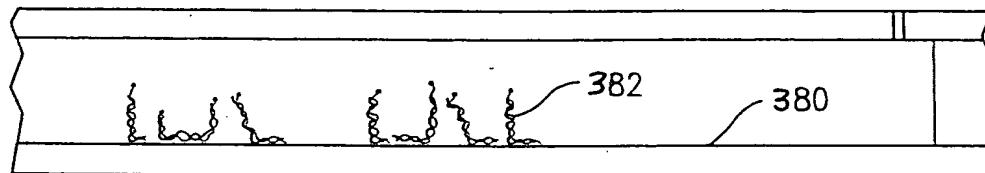


FIG.24B

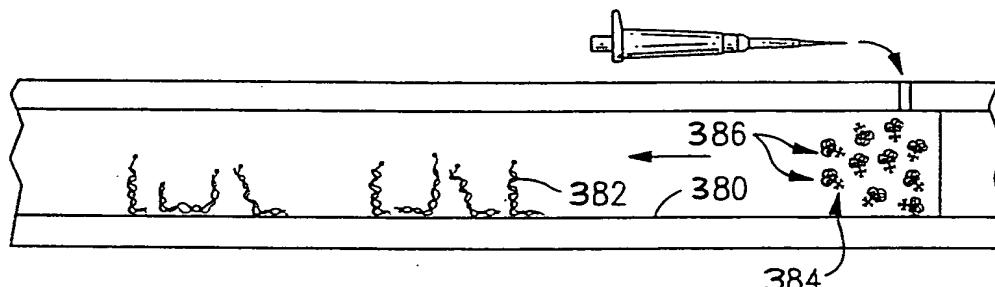


FIG.24C

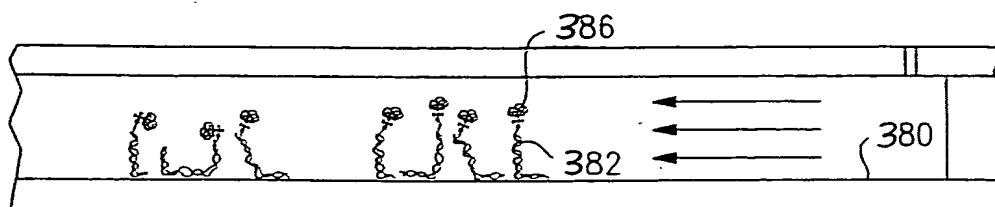


FIG.24D

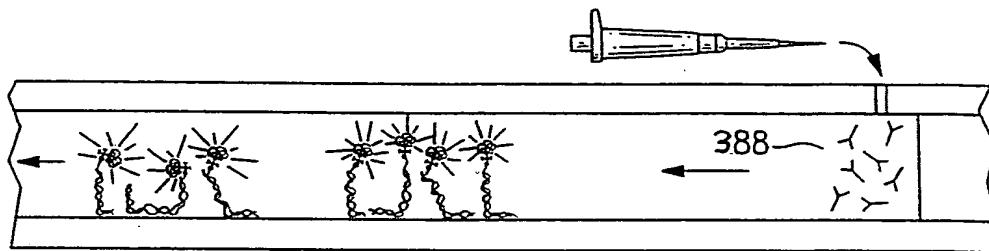


FIG.24E

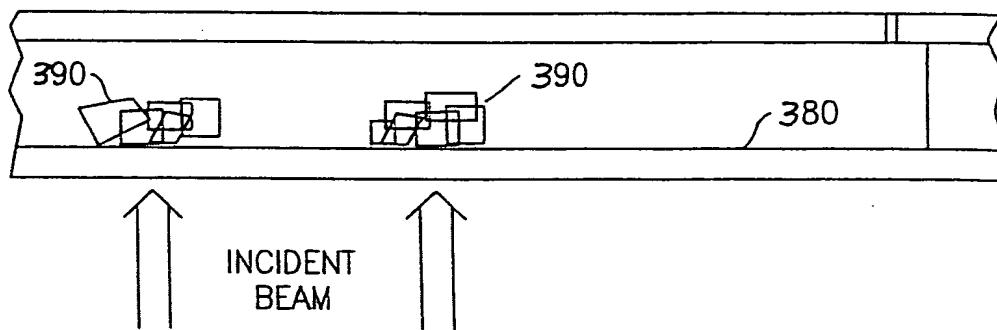


FIG.24F

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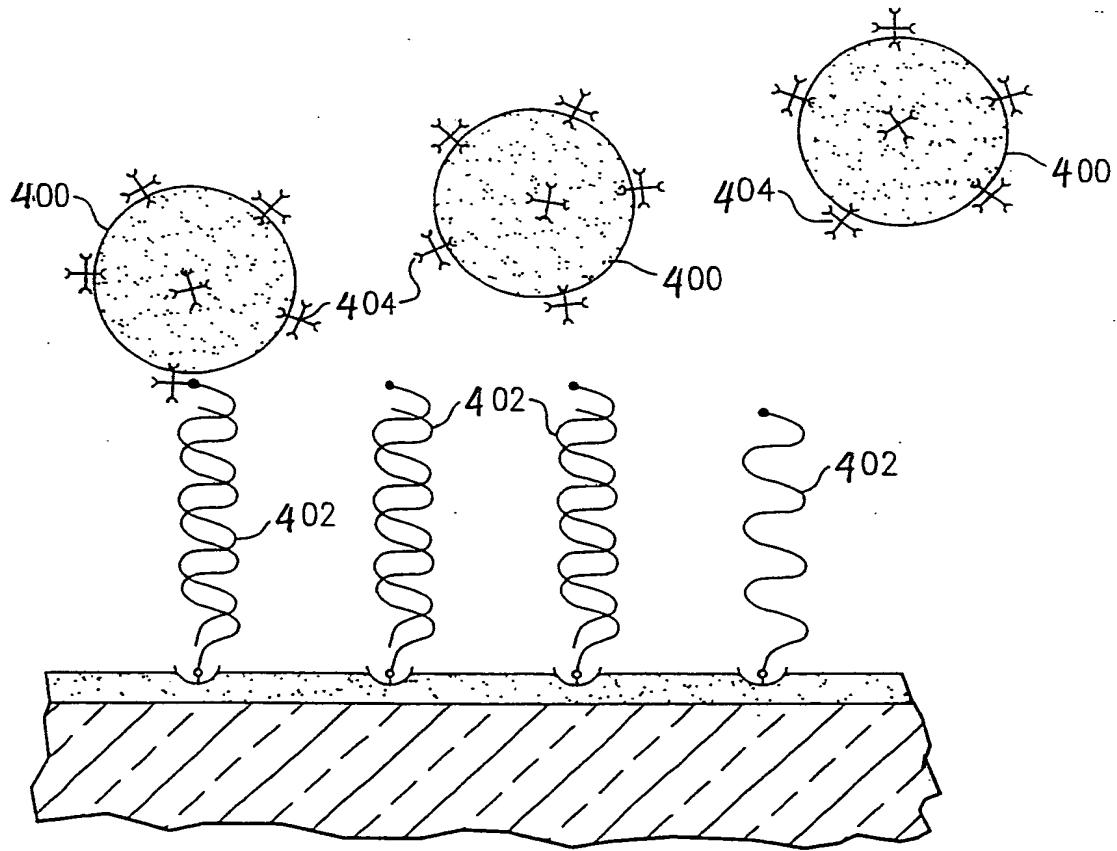


FIG. 25

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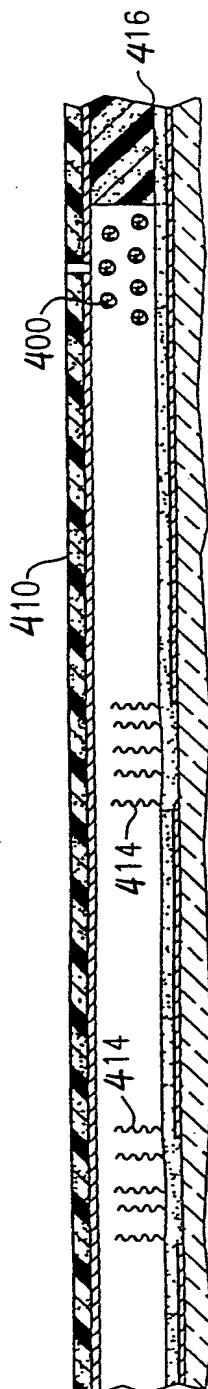


FIG. 26A

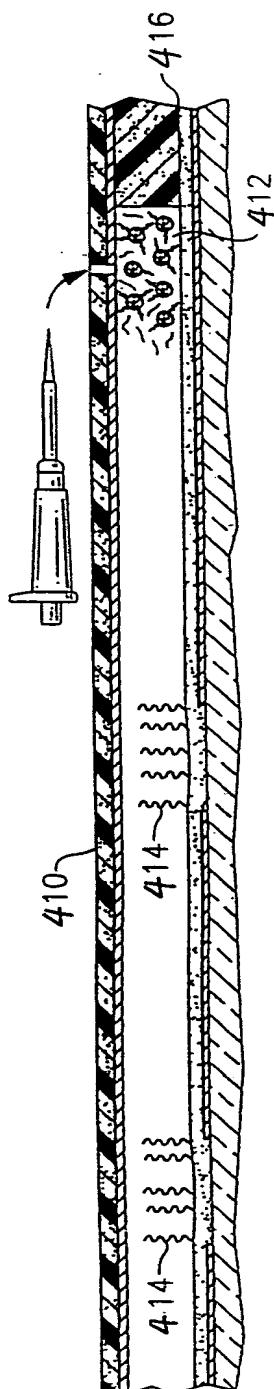


FIG. 26B

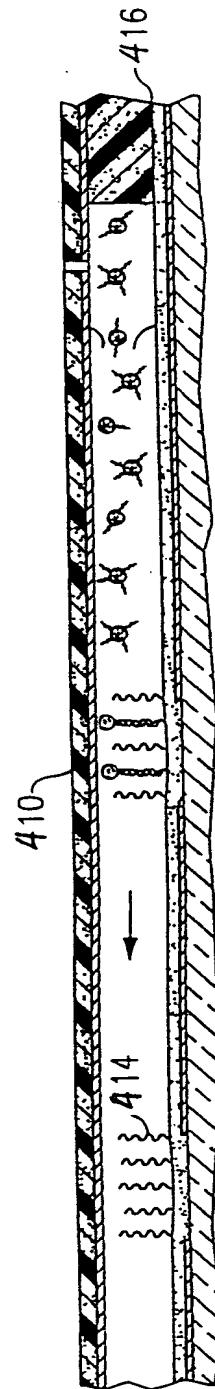


FIG. 26C

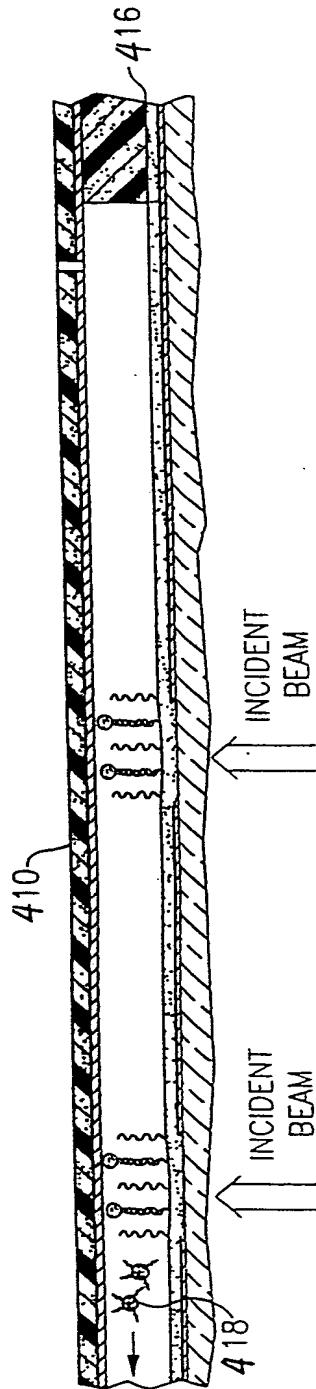


FIG. 26D

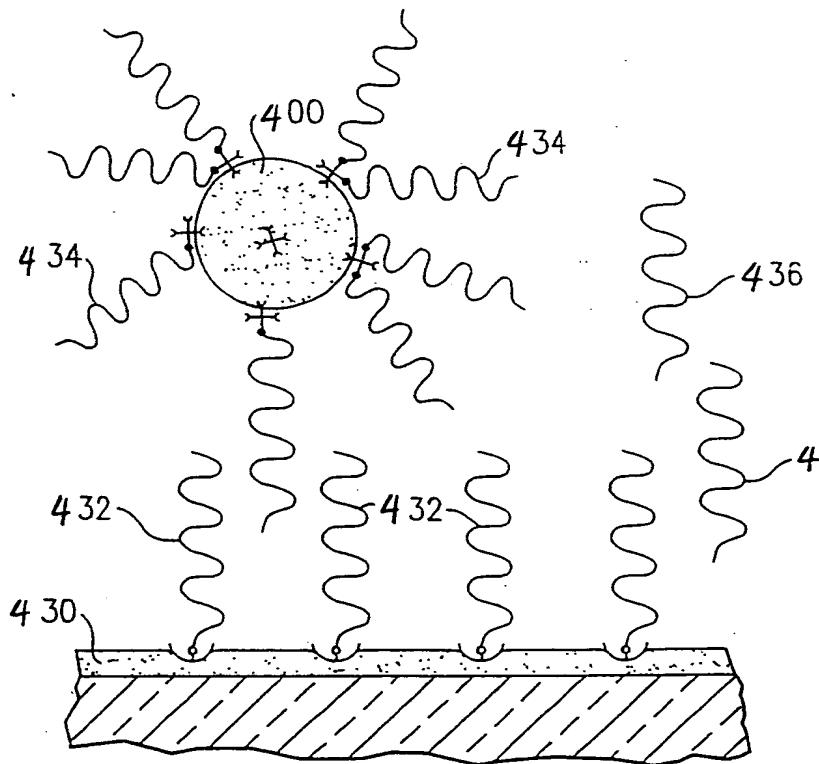


FIG. 27

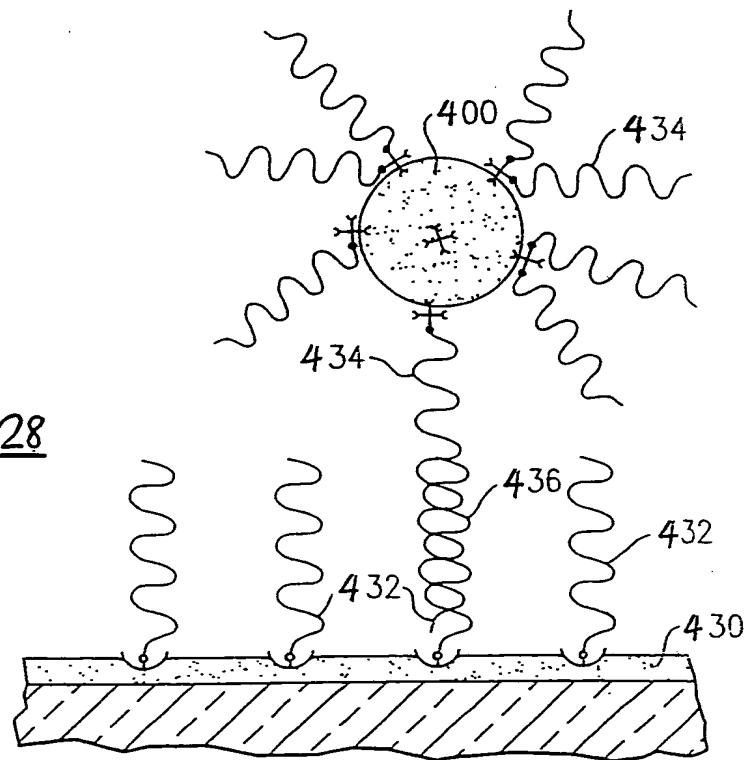


FIG. 28

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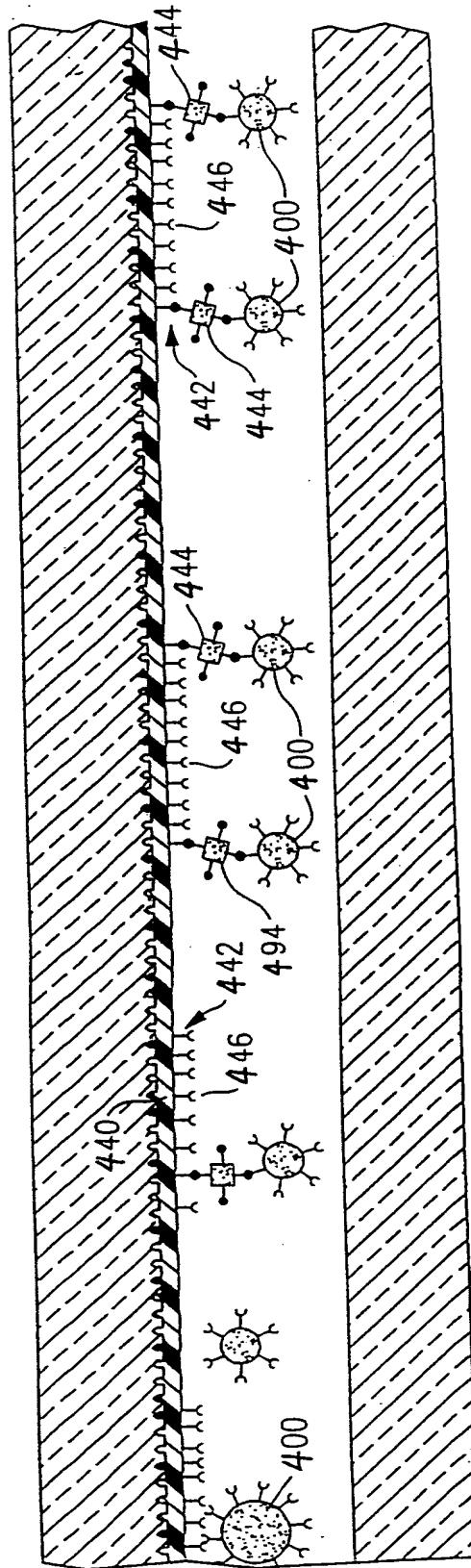
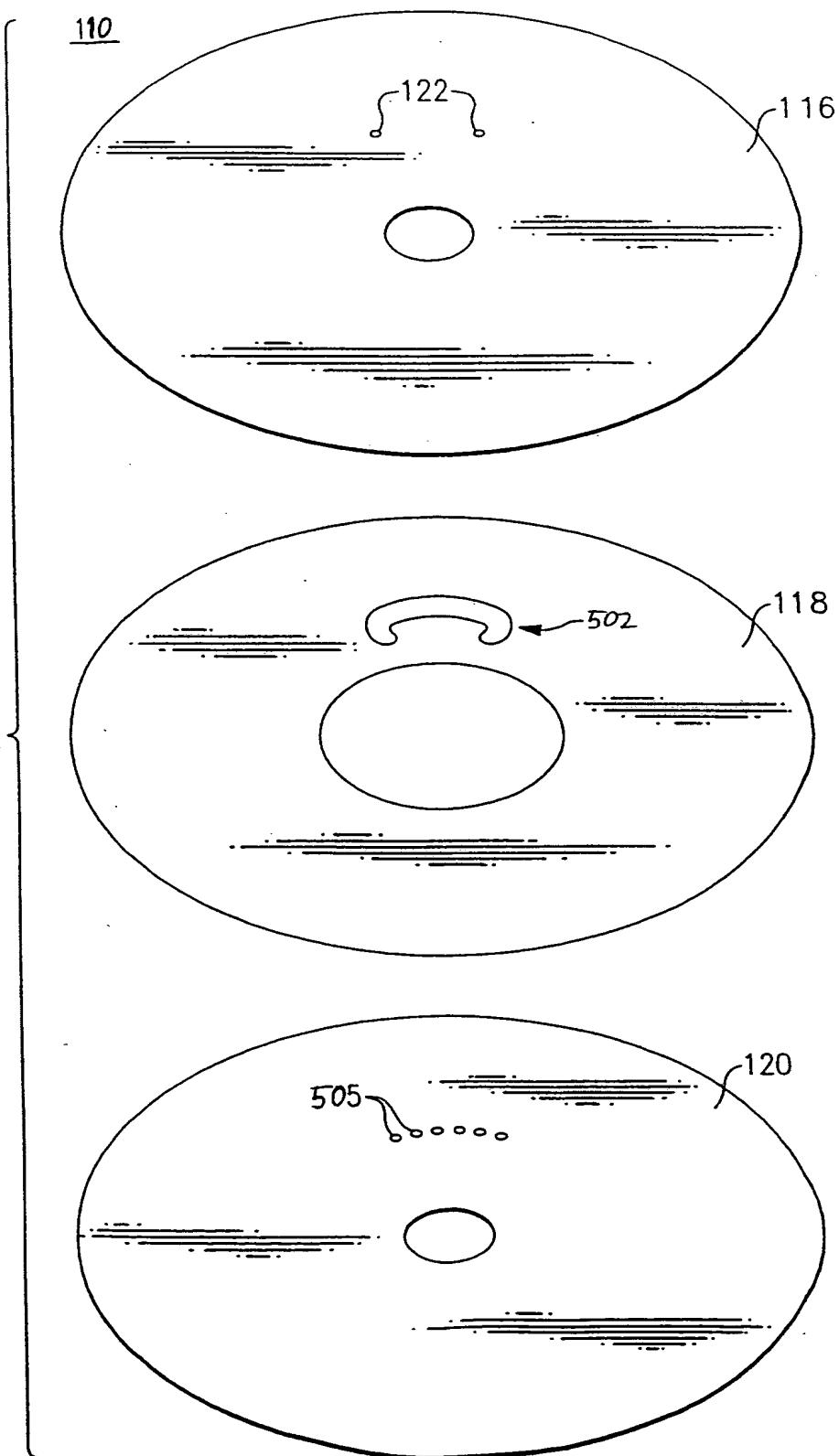


FIG. 29

FIG. 30



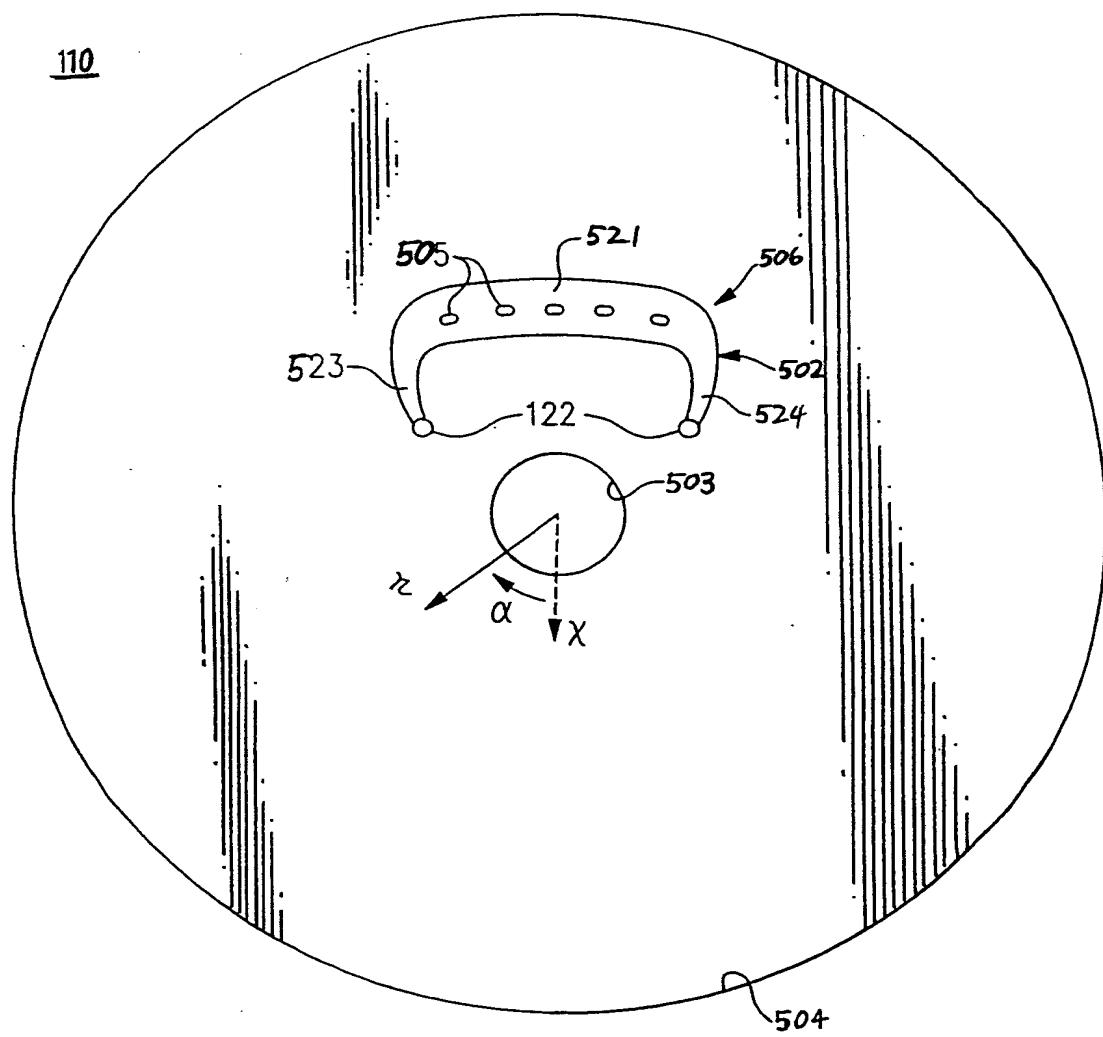
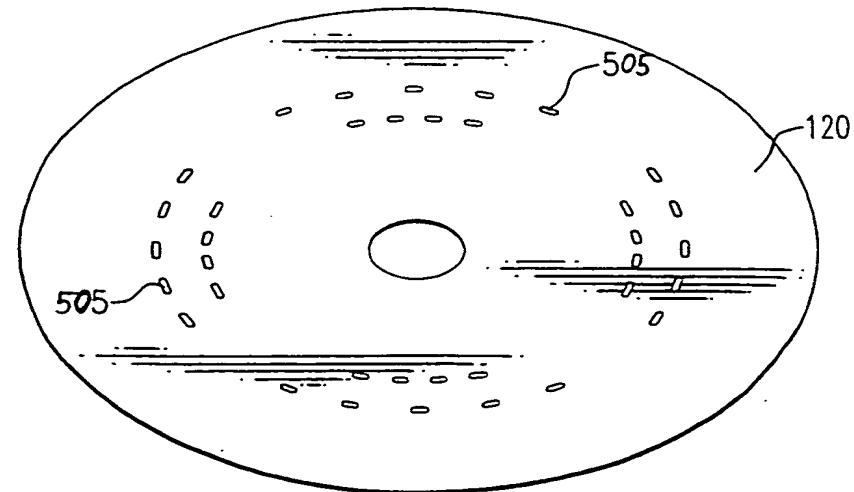
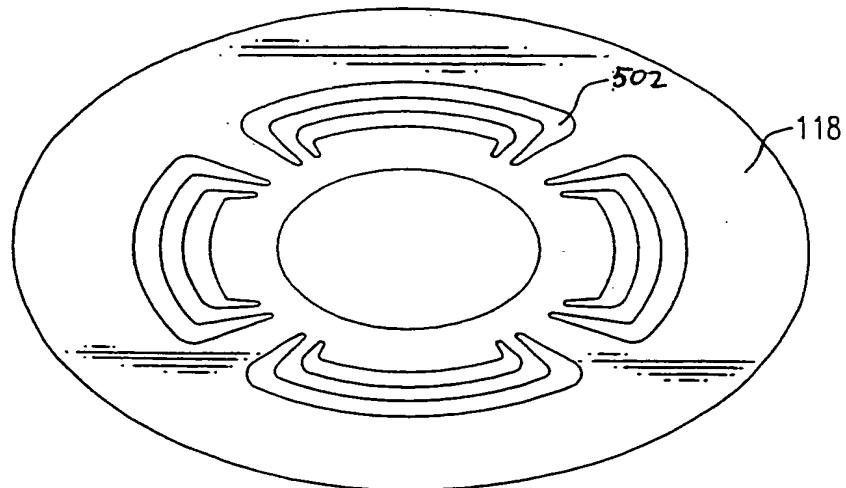
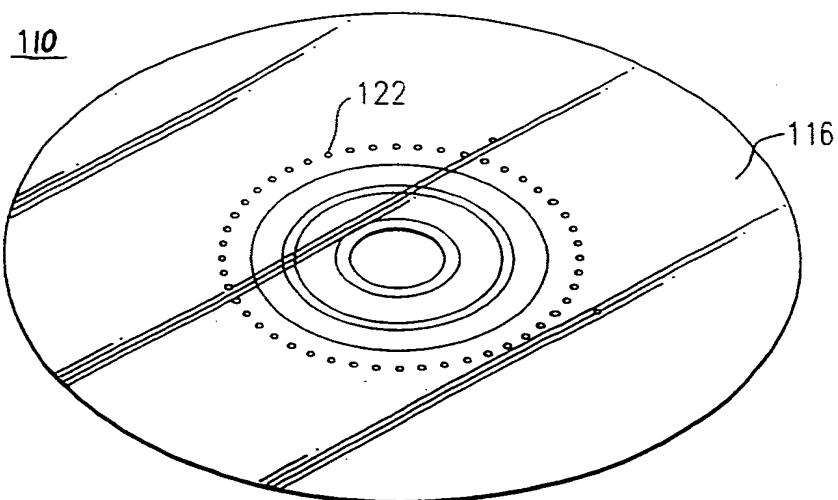


FIG.31

FIG. 32A

110

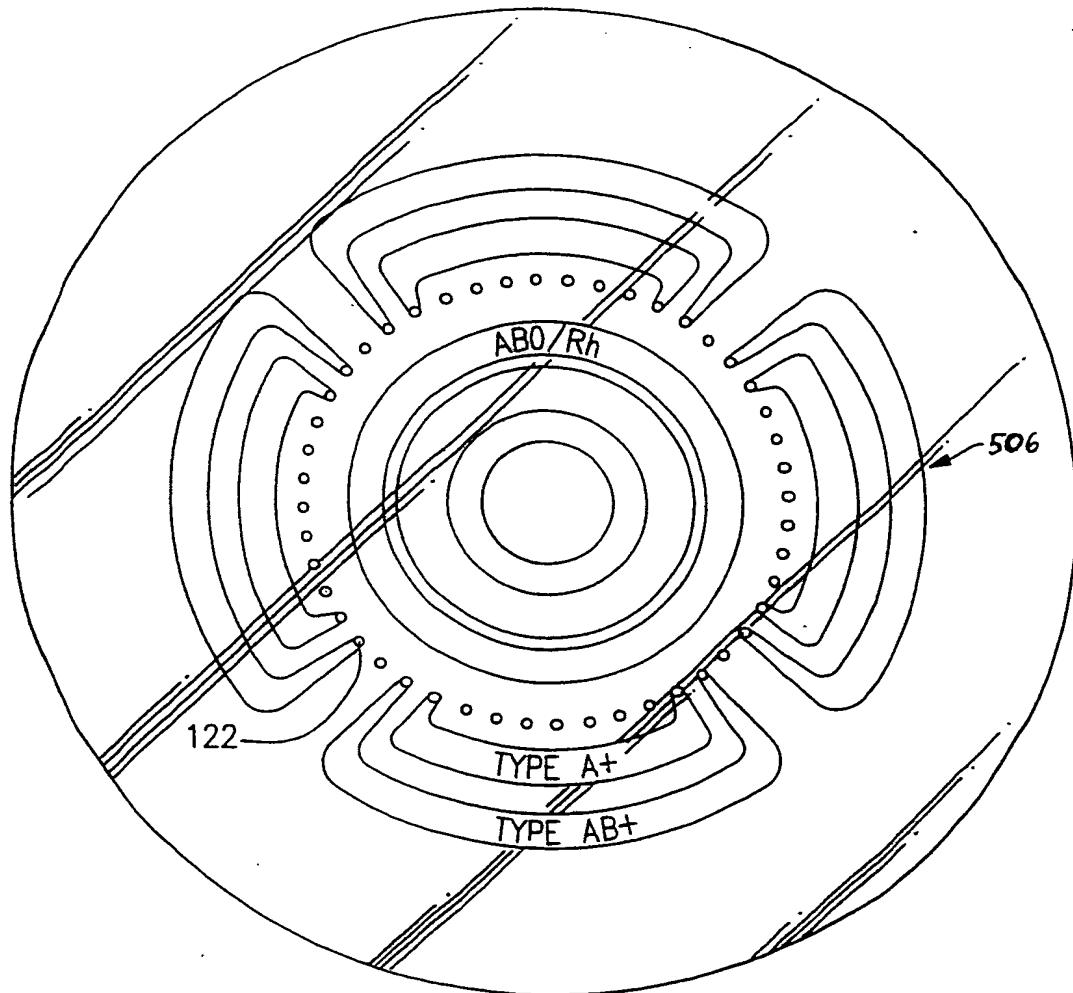


FIG.32B

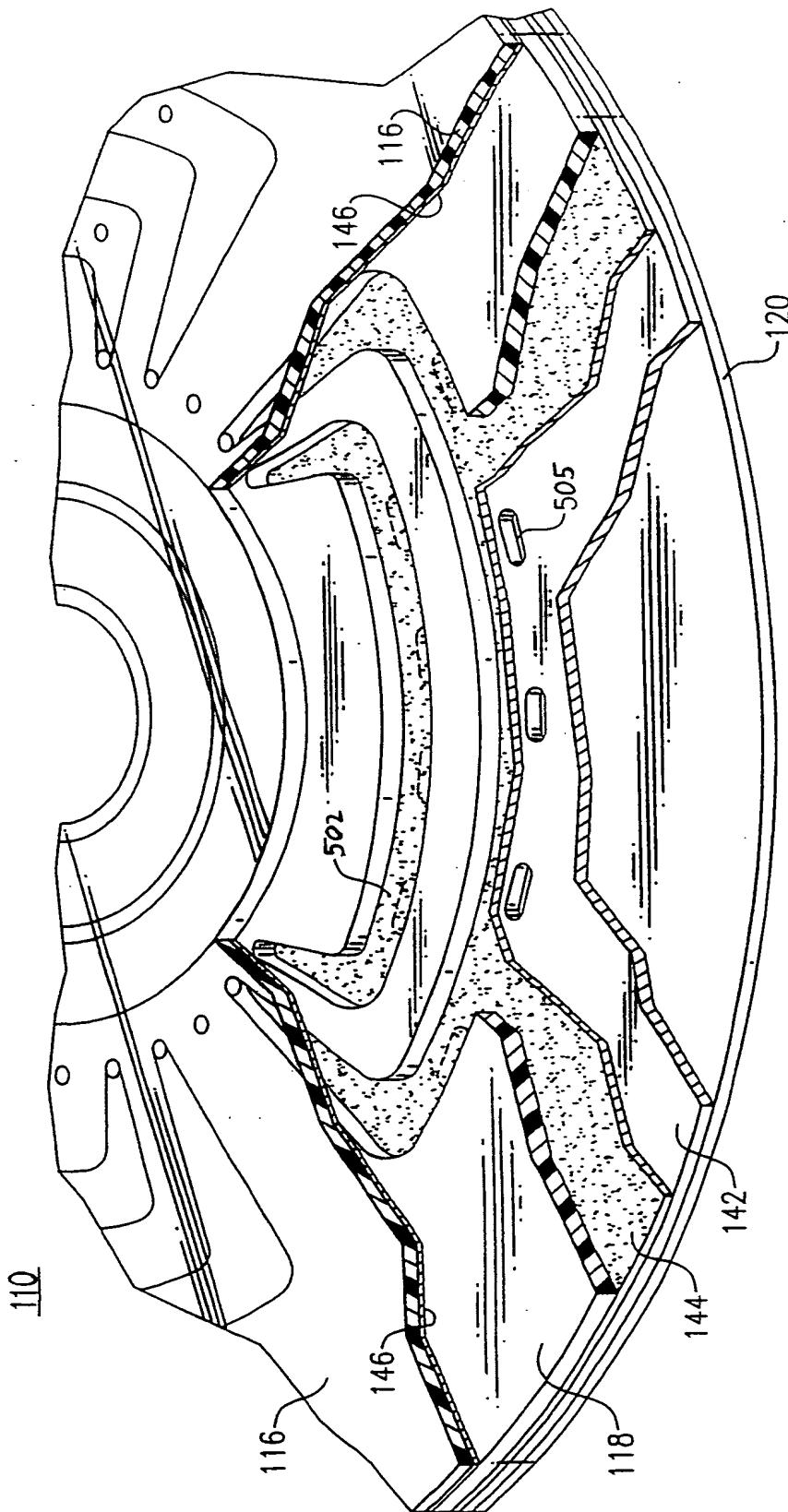


FIG. 32C

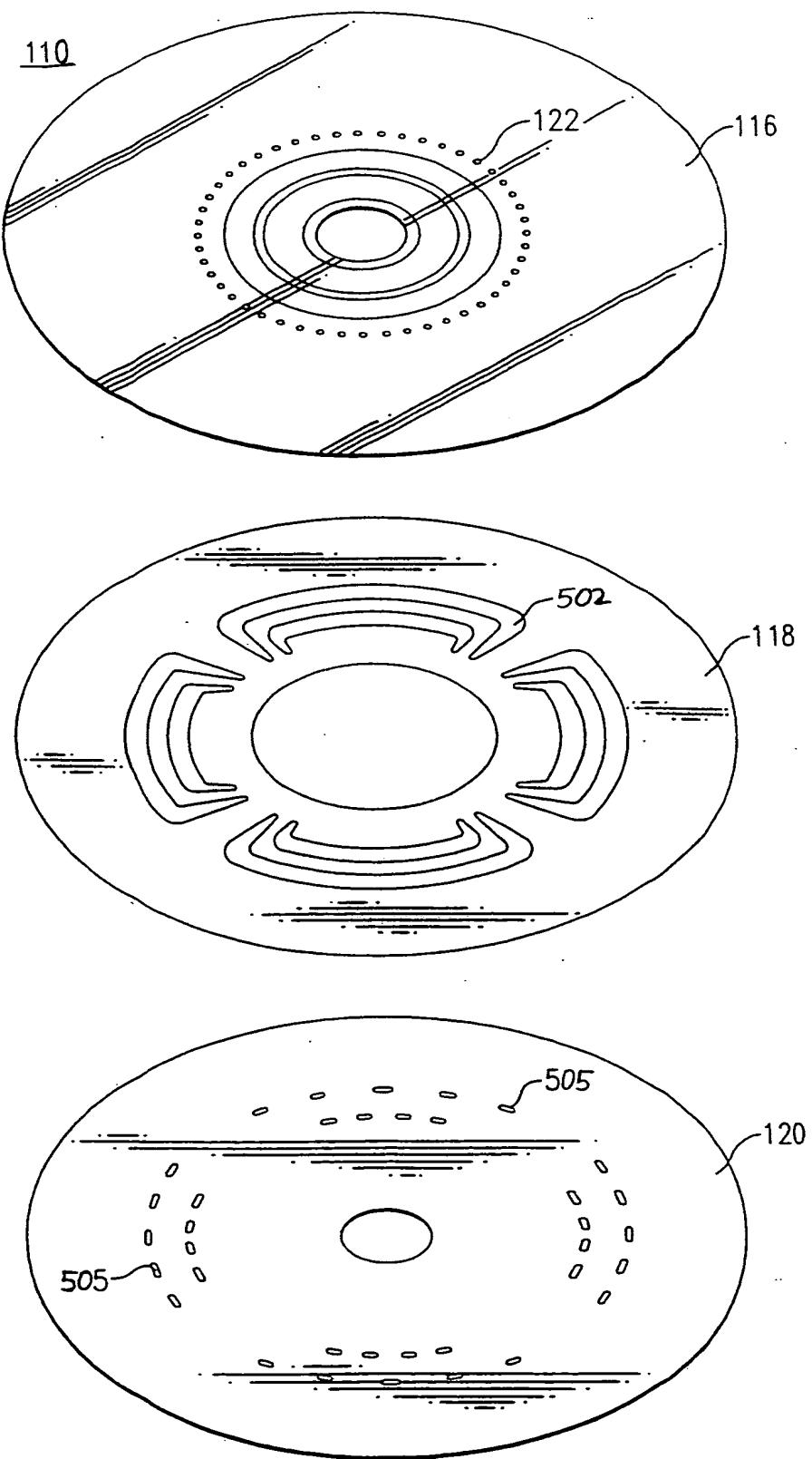
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FIG. 33A



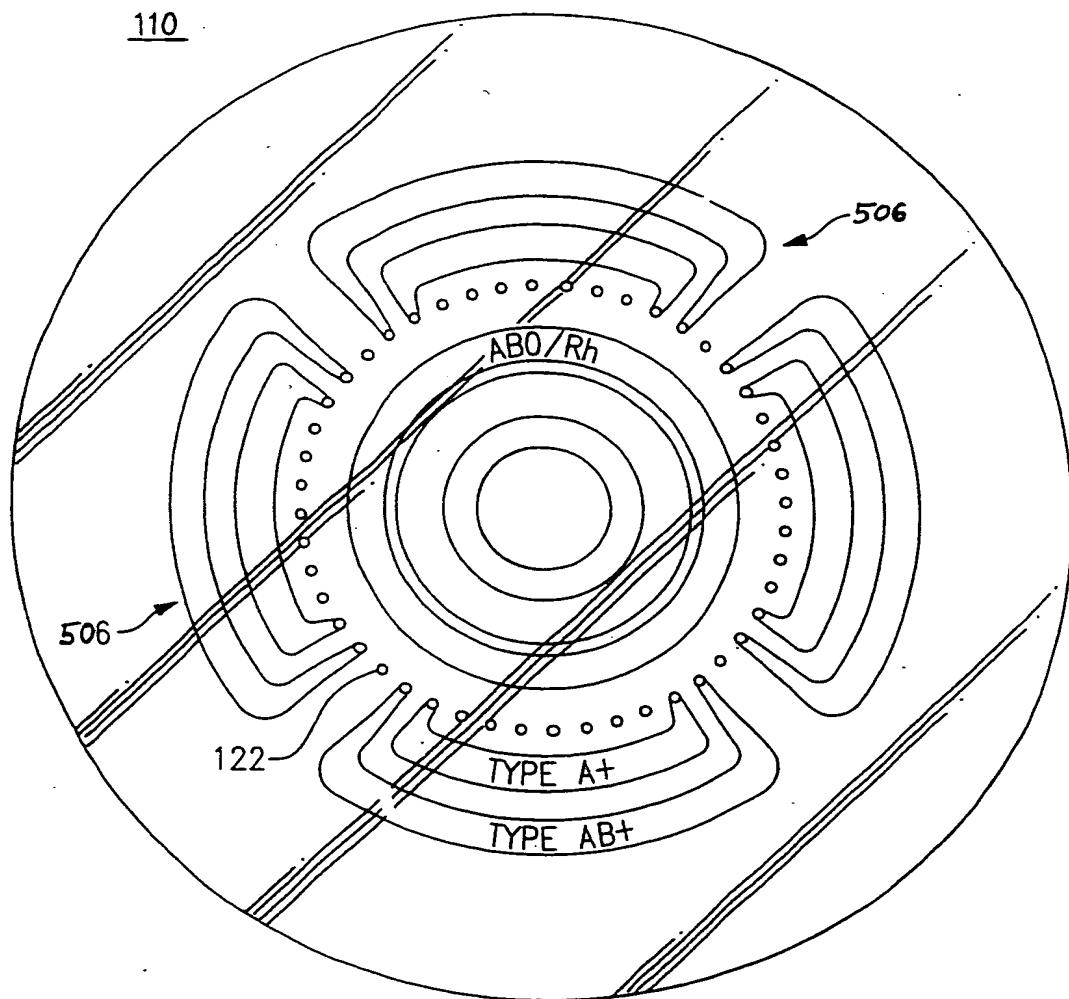


FIG. 33B

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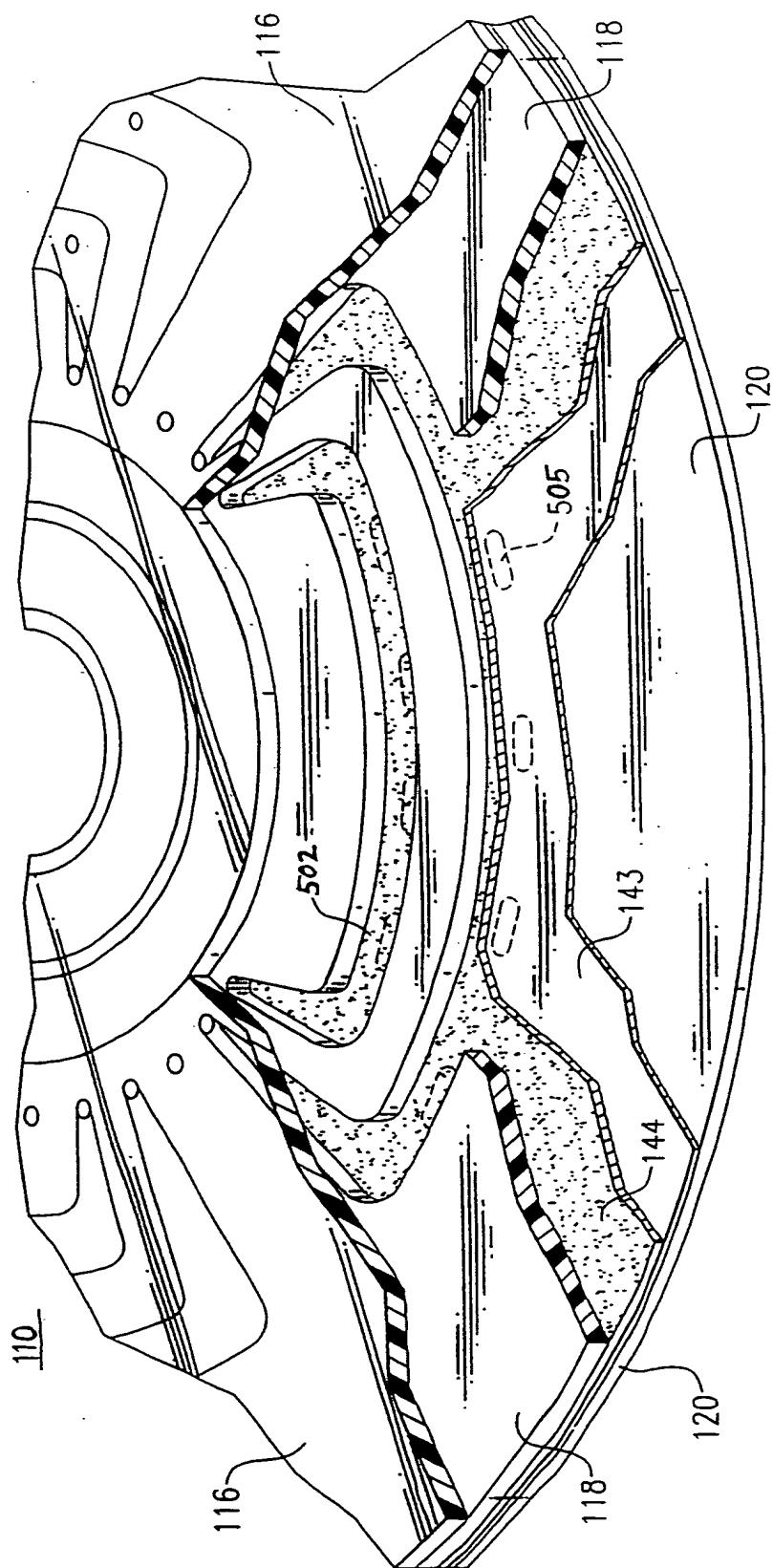


FIG. 33C

OPTICAL BIO-DISCS INCLUDING SPIRAL FLUIDIC CIRCUITS FOR PERFORMING

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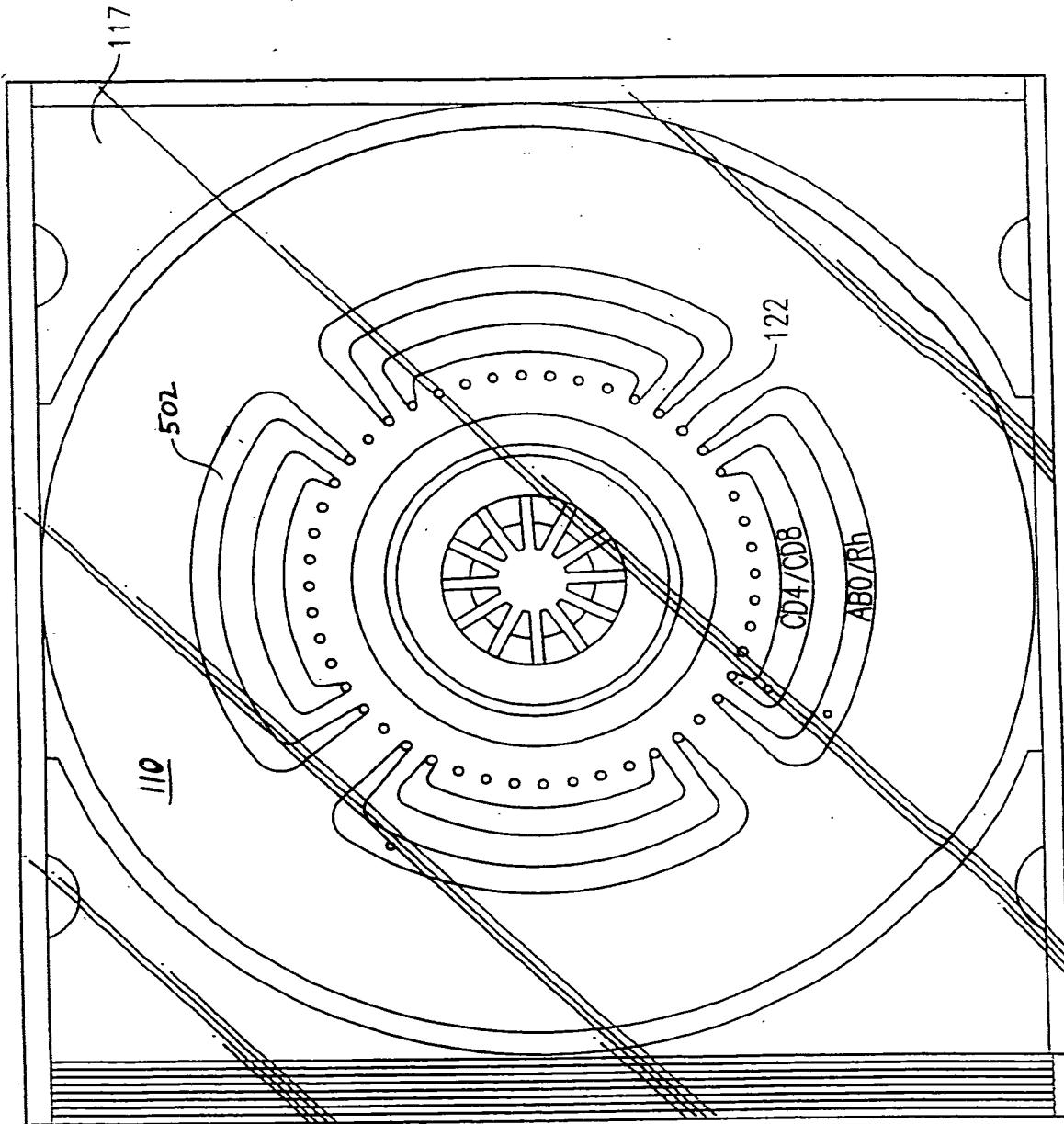


FIG. 34

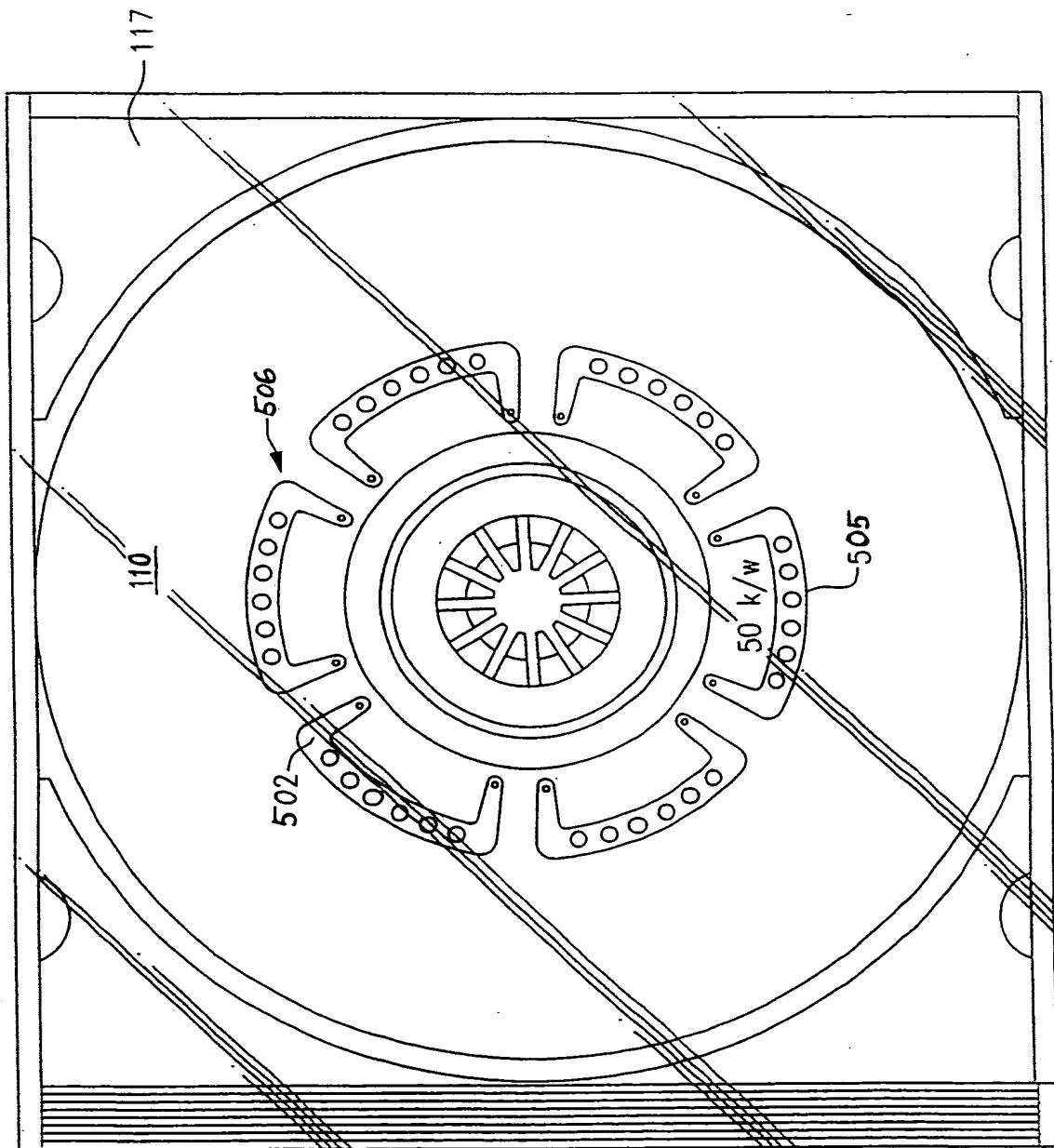
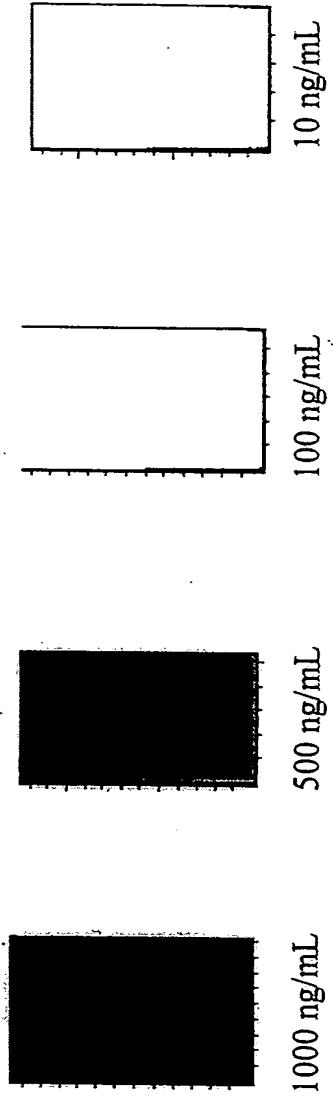


FIG. 35

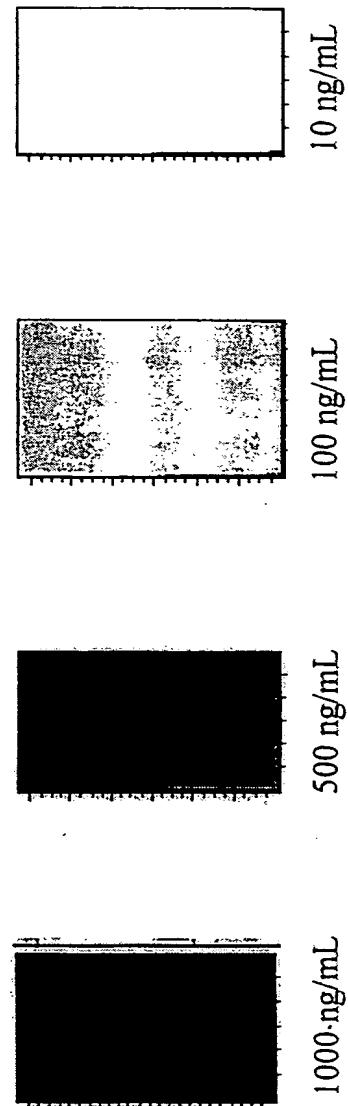
CD-Derived Hemoglobin Dose-Response Images

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Hemoglobin Ao



Hemoglobin A1c



N. Staimer
BTI

Fig. 36

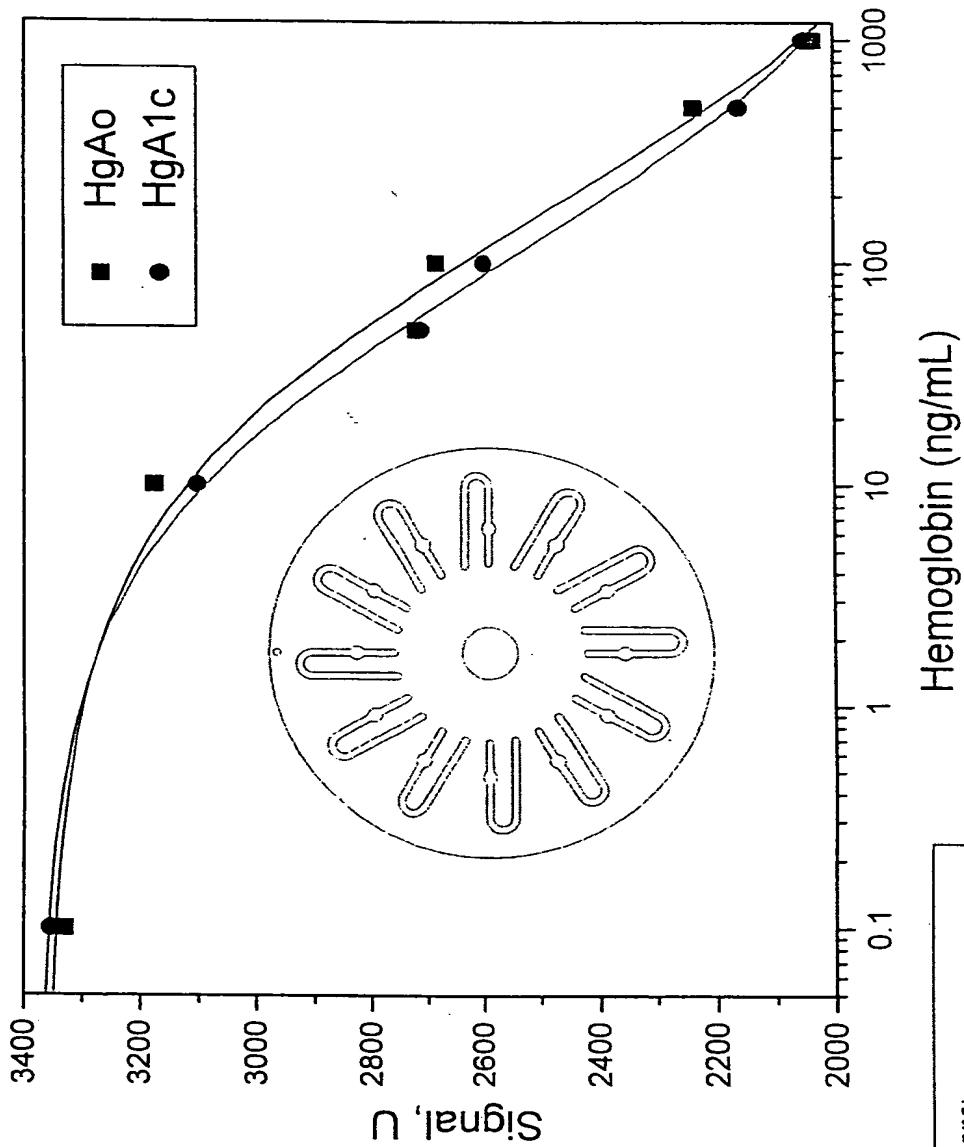
BEST AVAILABLE COPY

Typical Standard Curves for Non-Glycated Human Hemoglobin (HgAo) and Glycated Hemoglobin (HgA1c) on an Optical U-Channel Disk (BCD™)

OPTICAL BIO-DISCS INCLUDING SPIRAL FLUIDIC CIRCUITS FOR PERFORMING ASSAYS

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Immunoassay Conditions:
Immobilized Haptoglobin on Disk: 100 ng/mL
Dilution of Goat anti-Human Hemoglobin (HRP-labeled): 1:4000

N. Staimer
BTI

Fig. 37

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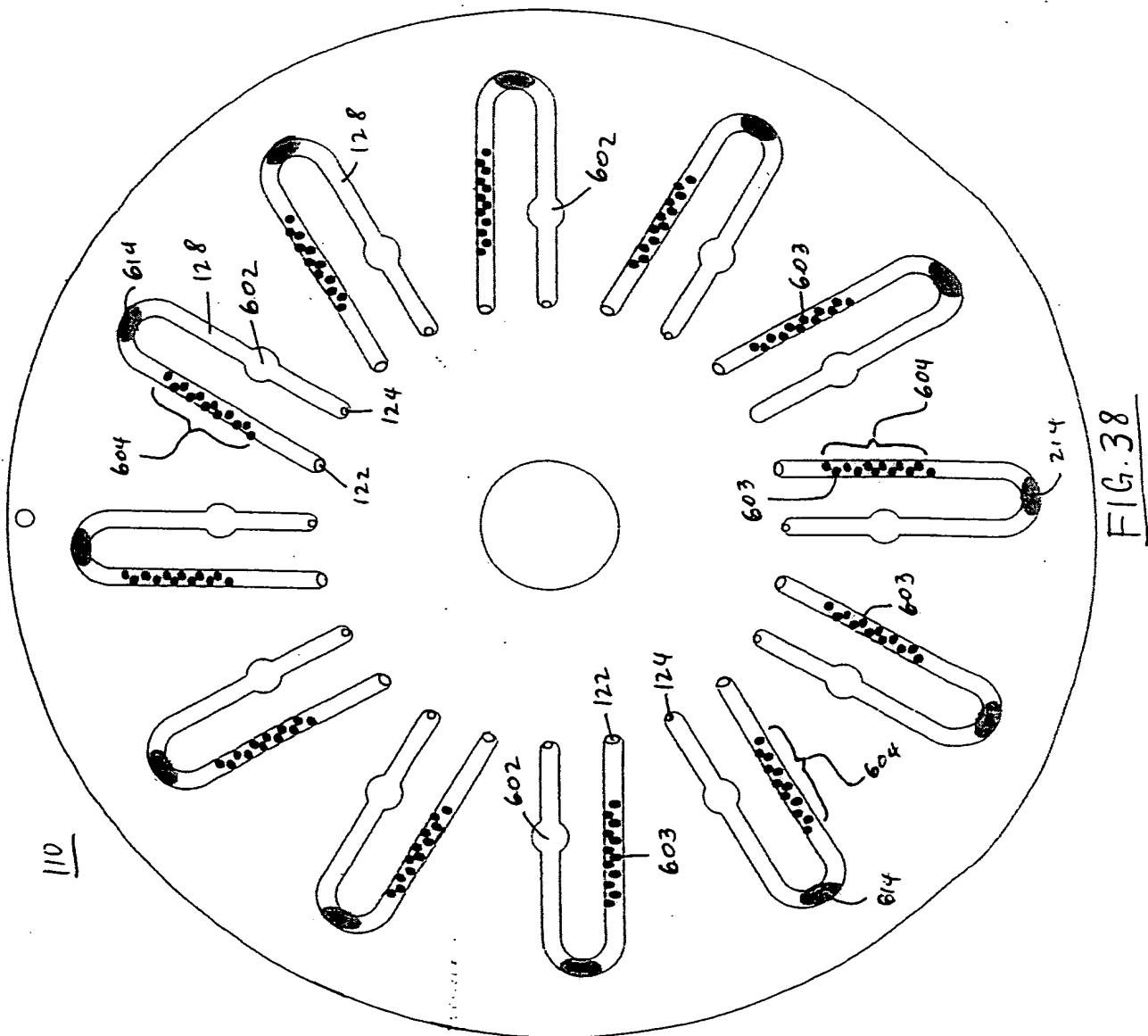


FIG. 38

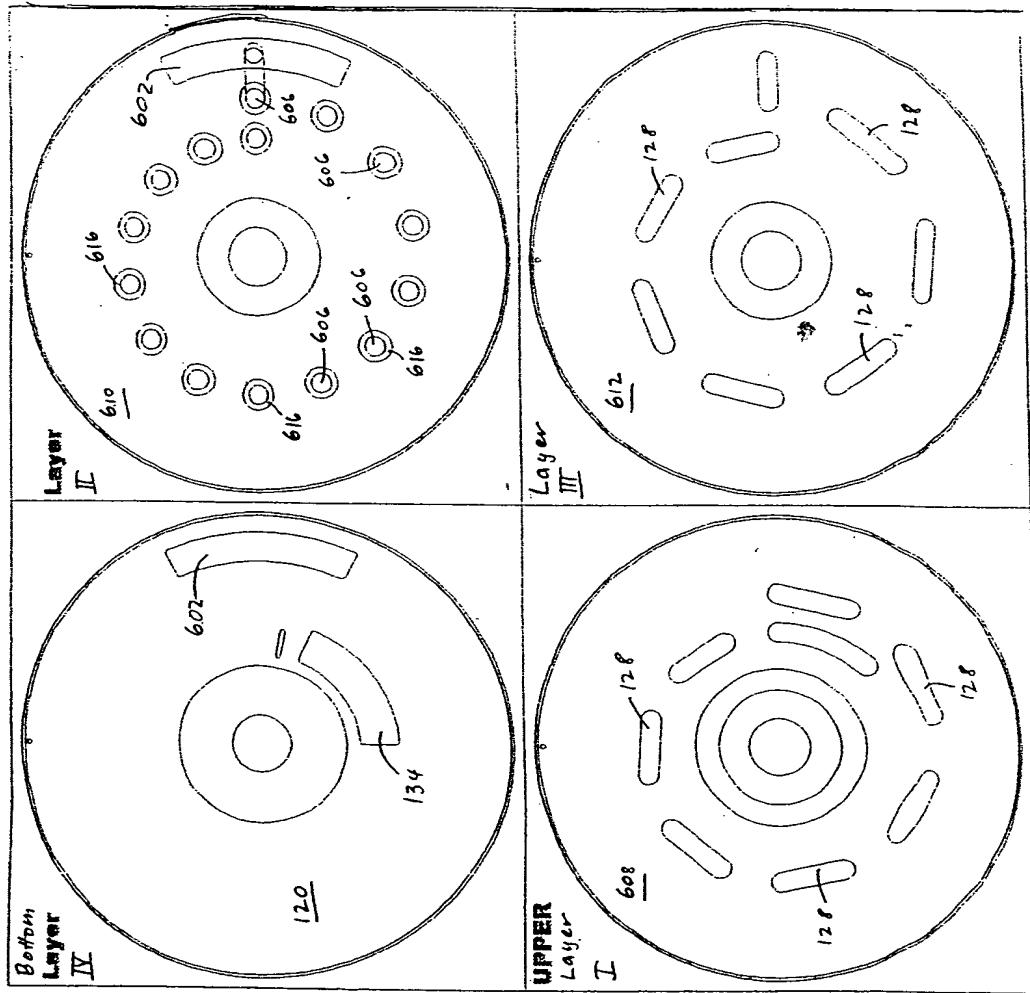
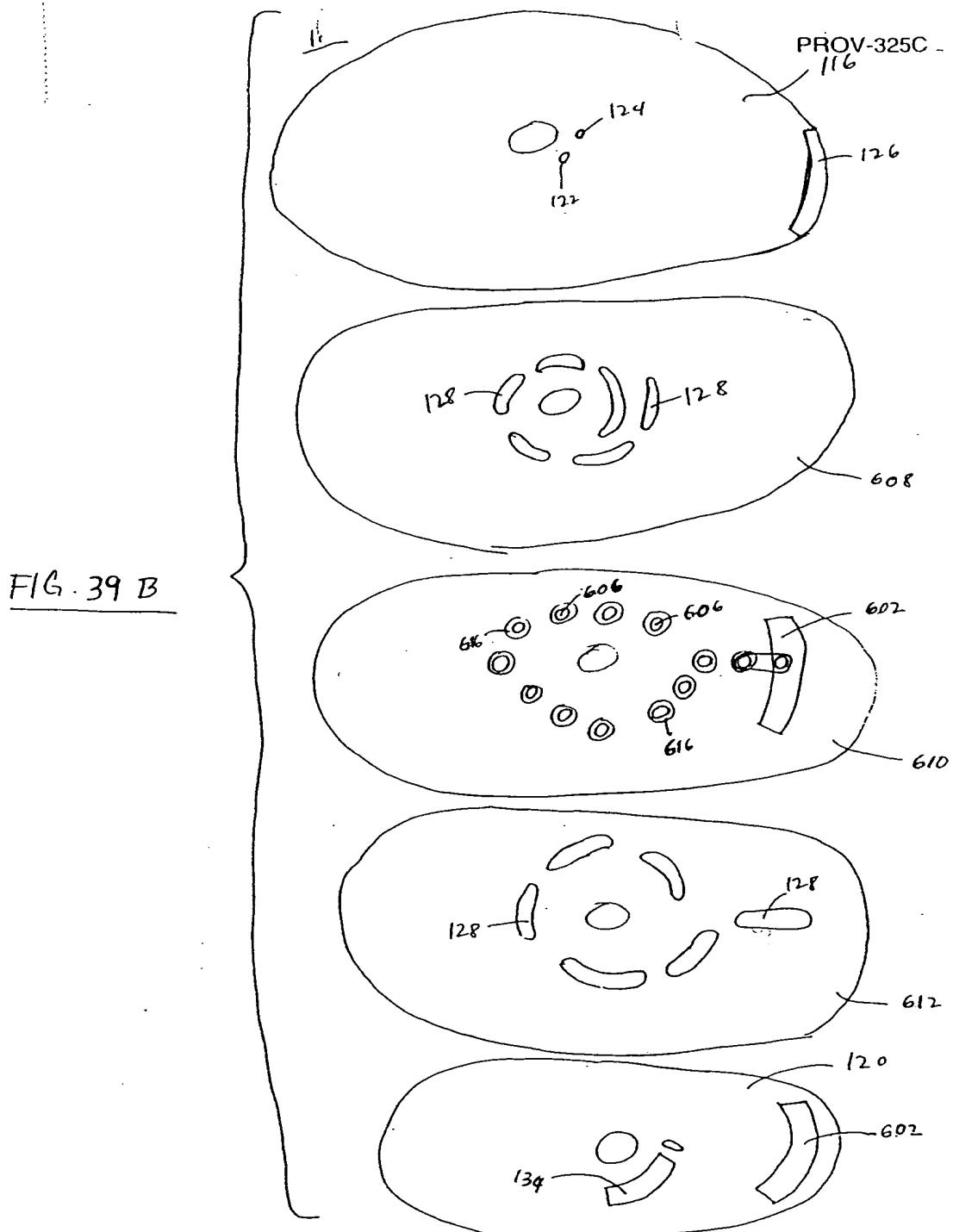


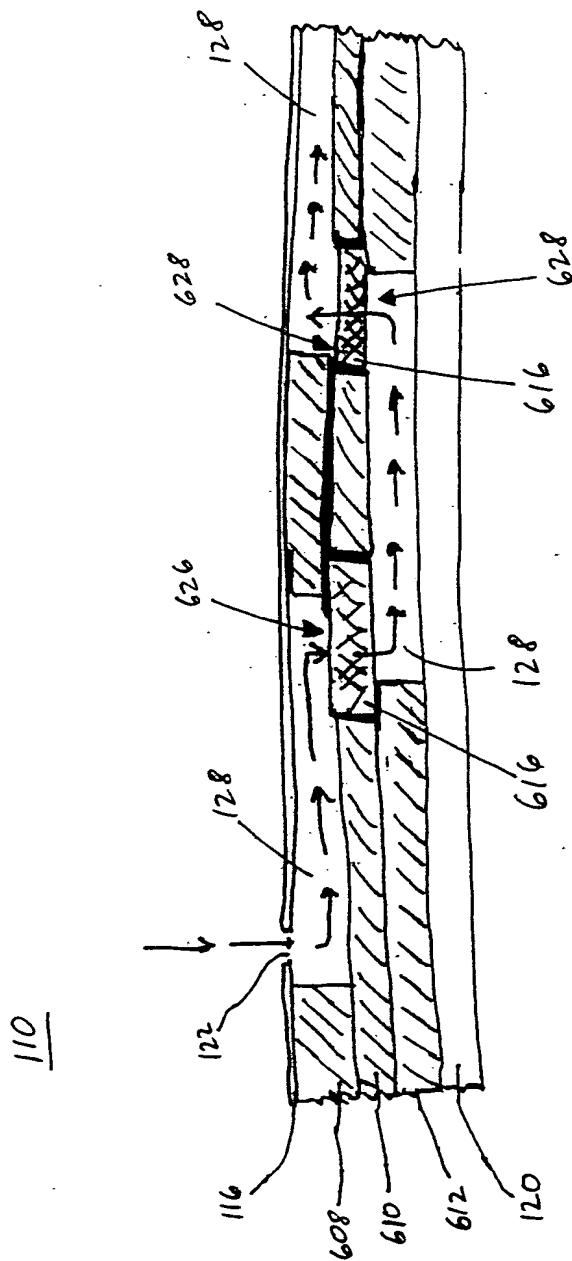
FIG. 39 A

Disc Layer Assembly:
 (Top to Bottom)

- I. Upper channel layer
- II. Middle membrane layer
- III. Lower channel layer
- IV. Bottom substrate layer

Note: A top most cap layer (116) with the inlet and vent ports is not shown.





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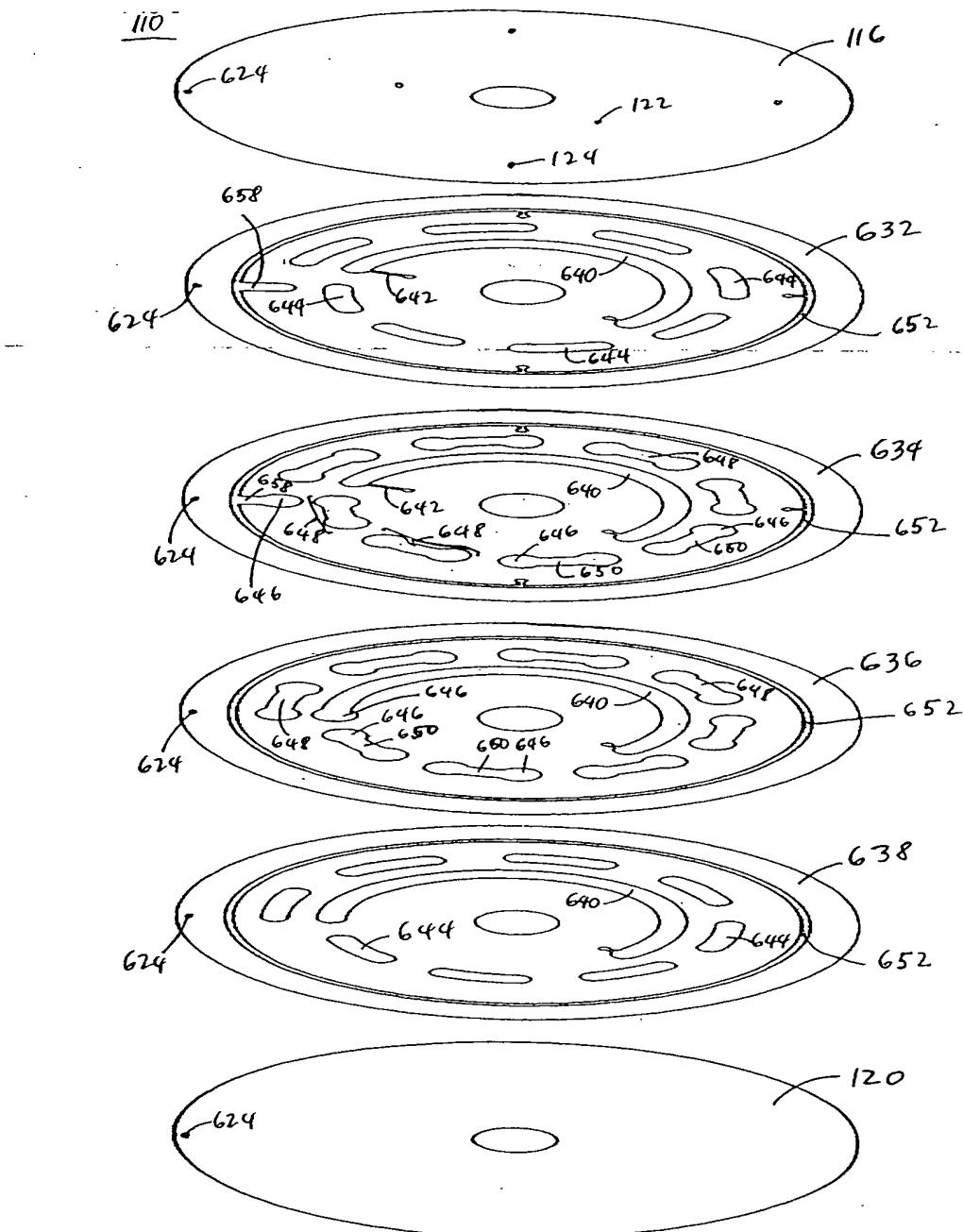


FIG. 40A

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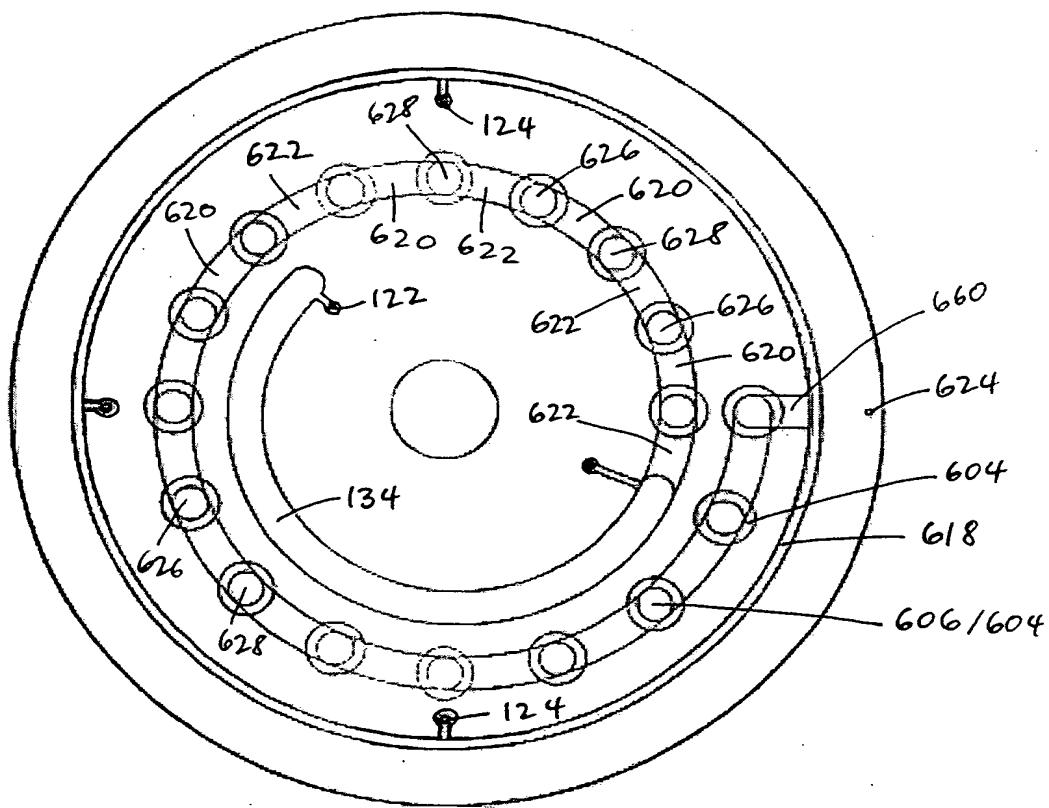


FIG. 40B

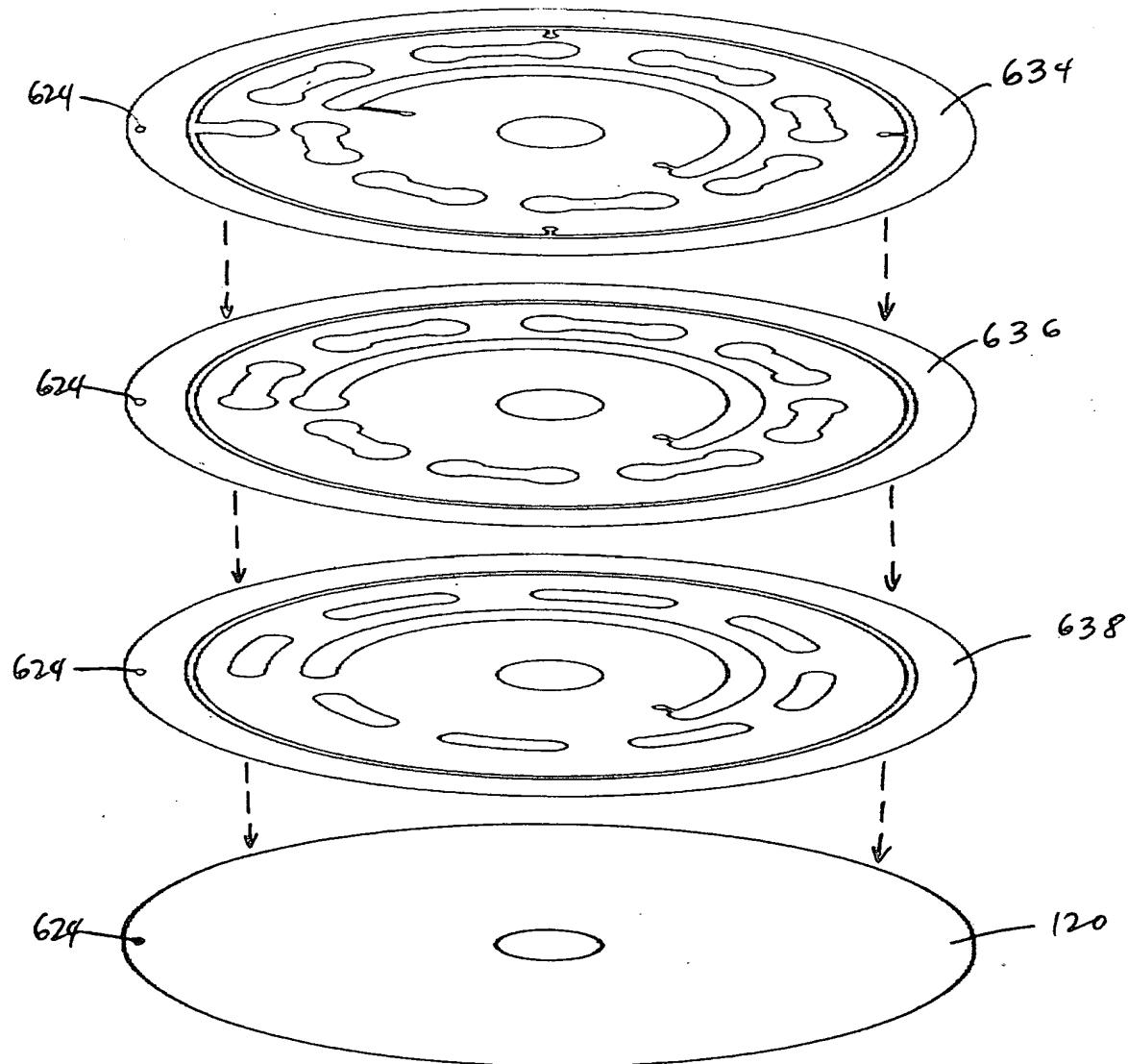


FIG. 41A

FIG. 41B

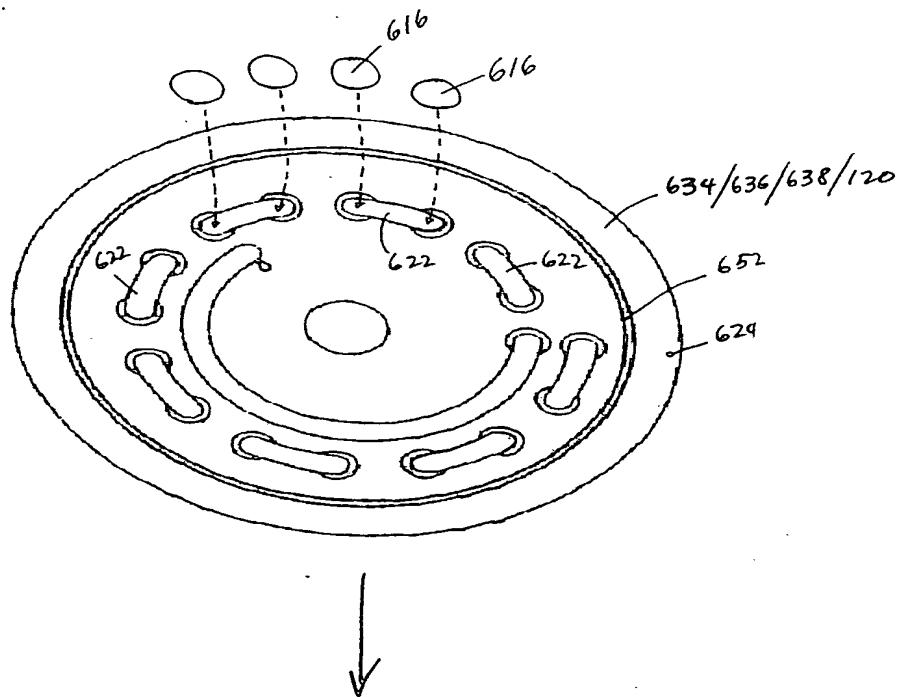
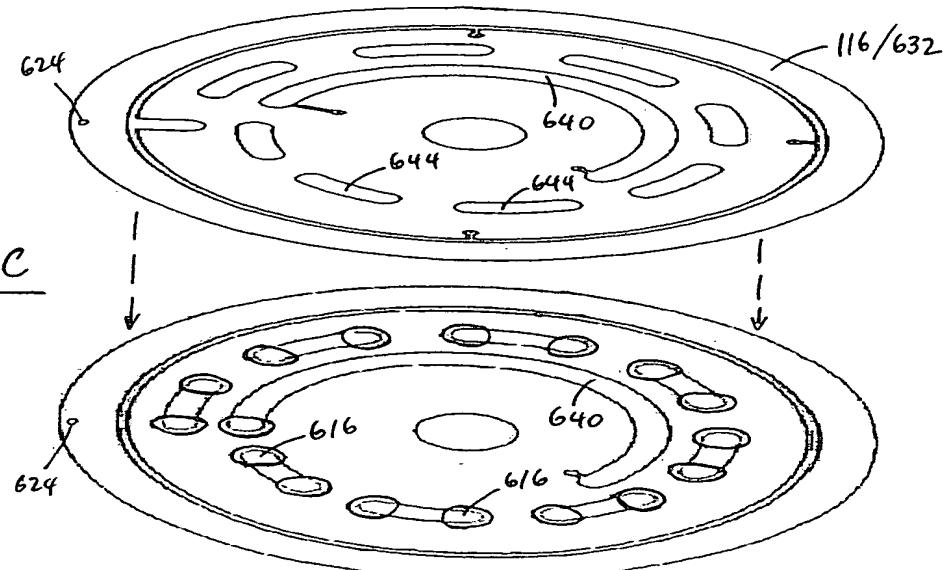


FIG. 41C



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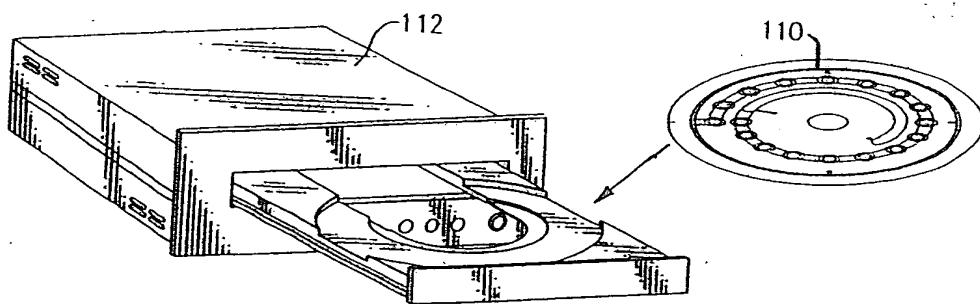
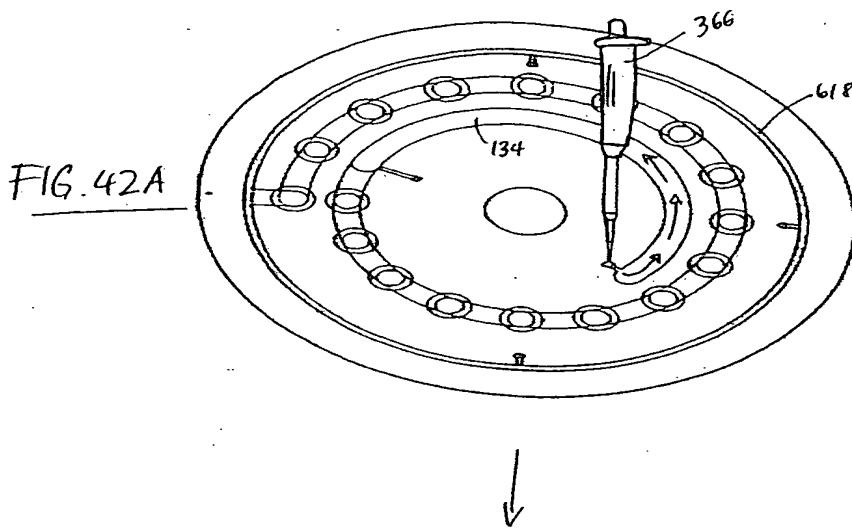


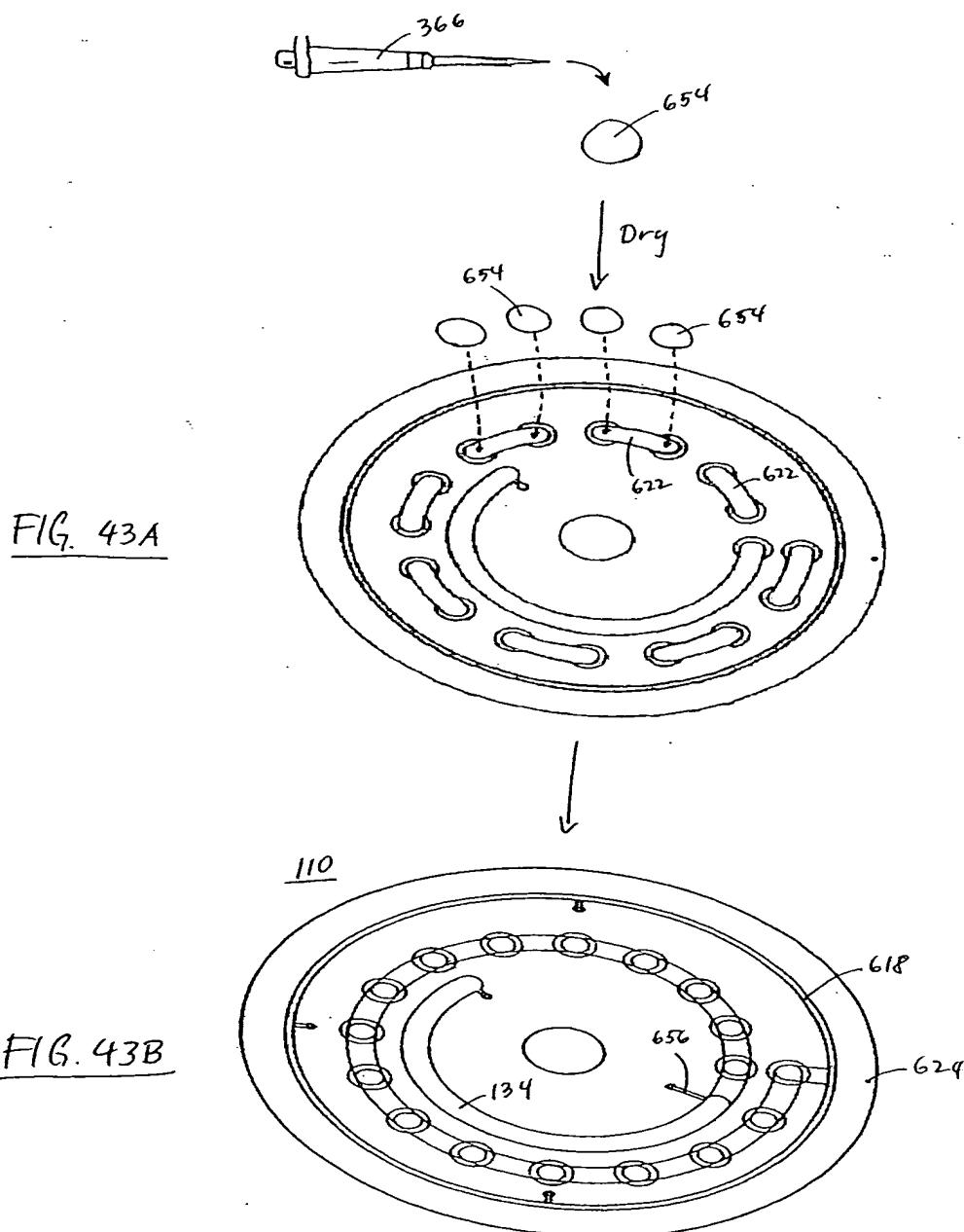
FIG. 42B

OPTICAL BIO-DISCS INCLUDING SPIRAL FLUIDIC CIRCUITS FOR PERFORMING

ASSAYS

Staimer, et al.

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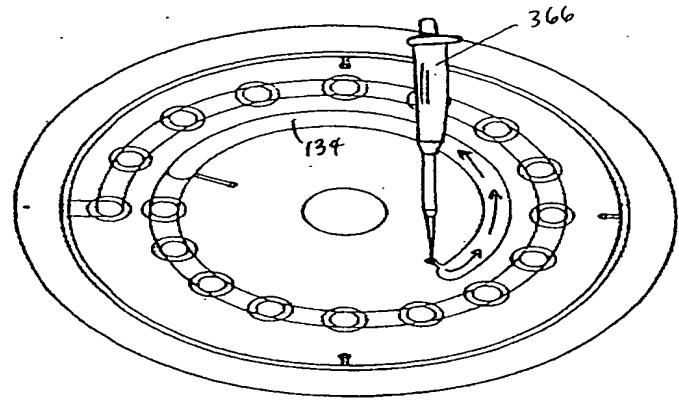
OPTICAL BIO-DISCS INCLUDING SPIRAL FLUIDIC CIRCUITS FOR PERFORMING

ASSAYS

Staimer, et al.

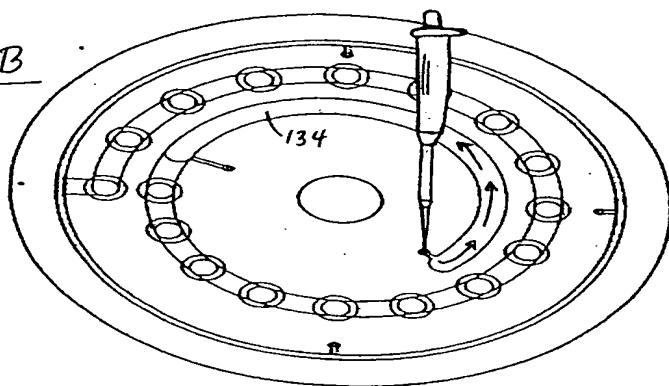
Appl. No.: Unknown Atty Docket: NAGACO.215A

FIG. 44A



↓ SPIN

FIG. 44B



↓ SPIN

OPTICAL BIO-DISCS INCLUDING SPIRAL FLUIDIC CIRCUITS FOR PERFORMING
ASSAYS
Staimer, et al.
Appl. No.: Unknown Atty Docket: NAGACO.215A

FIG. 44C

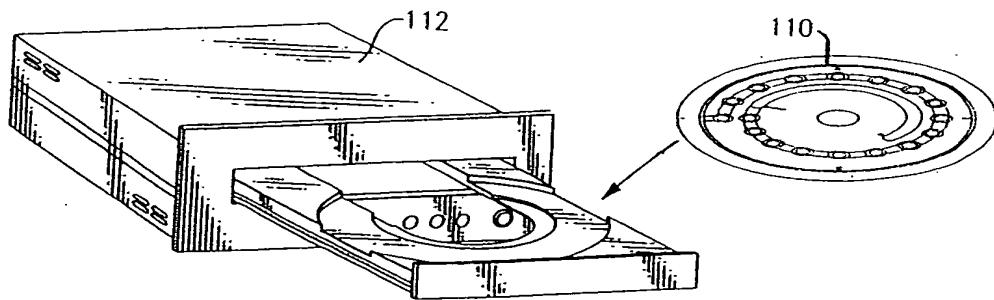
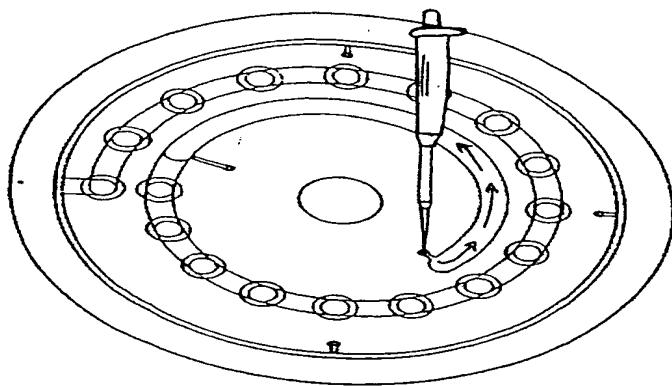


FIG. 44D

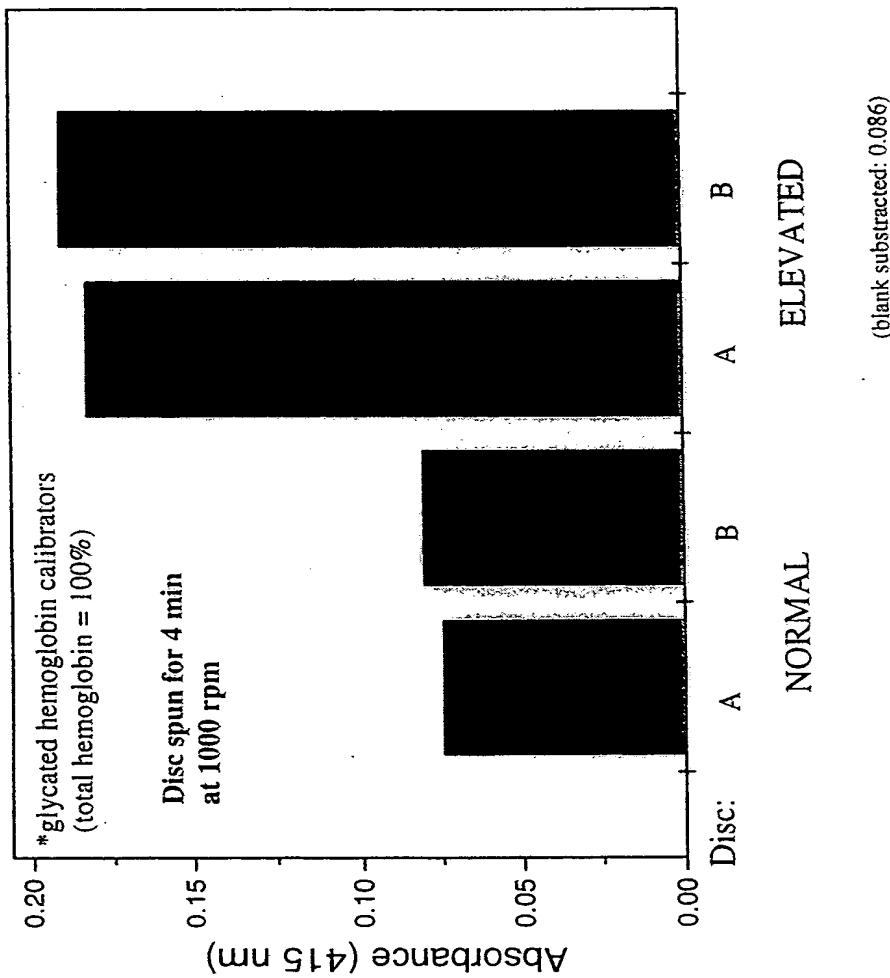


FIG. 45